Epistemologies of Healing ⚹ Volume 10

MEDICINE BETWEEN SCIENCE AND RELIGION

Explorations on Tibetan Grounds



Edited by Vincanne ADAMS
Mona SCHREMPF
and Sienna R. CRAIG

Medicine between Science and Religion

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To our daughters Maggie and Lydia, Nima, and Aida

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Notes on Transliteration

To enable non-specialists to read Tibetan terms and names with greater ease, we have used a phonetic English transliteration of Tibetan terms in the main text, as well as of general references to the standard Tibetan medical text, the *Four Tantras* or *Gyüshi*. For all these, Wylie transcriptions are given in the index in brackets, together with a short glossary. However, in the main text we have used the Wylie system for other Tibetan texts that are directly cited, for example the medical commentary, the *Lhan thabs*. Where the *Gyüshi* is referred to specifically by quotation, the Wylie system has been used as well (*Rgyud bzhi* II, pp.) A Tibetan text that is literally cited and translated will appear in Wylie transcription as well as being translated into English. Proper Tibetan names for places, medicines and individuals have also been transliterated, with Wylie spellings recorded in the index. In the index, the names of Tibetan individuals are listed by the first letter of the first name, rather than following Euro-American convention for surname listings. For example, the Tibetan physician Yeshi Donden is listed under 'Y' rather than 'D'. Common Tibetan words – *amchi*, *karma*, *mantra*, *lama* – are listed throughout in italics without a romanized 's' to indicate plurality. However, plurality is sometimes implied, and can be inferred from the context.

Chapter 1

Introduction: Medicine in Translation between Science and Religion

Vincanne Adams, Mona Schrempf and Sienna R. Craig

A growing body of scholarship from the fields of history, anthropology, science and technology studies, and philosophy addresses the translation of scientific epistemologies as practices between and across cultures. Nowhere is this engagement more compelling than in discussions of medicine: what it consists in, how its claims to knowledge and efficacy are validated, how it allows for innovation and at the same time advocates a consistent empirical position, and how it is configured within cultural and national imaginaries and global markets. Likewise, socio-cultural and colonial studies of medicine reveal how biomedical science – translated into a variety of clinical, technological, sociological and political interventions aimed at improving the well-being of its 'target' populations – has had a tremendous impact at local, regional and global levels: from public health efforts in the early days of colonialism to the era of post-war health development campaigns, and now through the globalization of pharmaceutically-oriented clinical research.

Such inquiries have also given rise to new analyses about the problem of defining 'science' and locating its origins in 'Western', i.e., European-American, cultures. Arguments over what constitutes 'modern science' – and, by extension, 'modern medicine' – have often become political rather than empirical battles. As scholars in science studies have shown (such as Latour 1999, Needham 1956, Harding 2006, Prakash 1999), this moment in our intellectual history, and the scholarship it is producing, recalls the metaphor of an onion whose layers of skin never seem to end. The more layers get peeled away, the more new layers emerge, revealing the grounds upon which scientific truth claims are diaphanous, and contingent on a politics of knowledge. That which is labelled 'modern science' (or, for that

matter, biomedicine) rarely looks the same from one location, time and culture of its practice to the next (see Traweek 1992, Verran 2001, Lock 2001). Furthermore, the dichotomization and historicization of healing practices into those deemed advanced modern 'scientific medicine' and those that are provisionally labelled 'religious', 'traditional' or 'alternative' medicine is by now recognized as itself a product of a specific epistemological view – a view deeply embedded in the Enlightenment and in colonialist engagements with the natural and social world (see Prakash 1999, Nandy 1990, Langford 2002, Adams 2002a, 2002b). The infiltration of biomedical science into locales far from its sites of origin – a phenomenon brought about by colonialism, international travel, development aid and the market dissemination of technology – have also been well studied in many fields.

Scholarship that attempts to show how ideas and practices of science in general, and biomedicine in particular, are being shaped by their engagements on non-Western grounds is comparatively abundant if one includes explorations of public health and international health development (cf., Nichter 2008). And yet, despite this growing interest, there are still relatively few studies that document the relations between science, medicine and religion – as ideas, practices, technologies and outcomes influencing each other – across cultural, national, geographic and historically situated terrain. *Medicine between Science and Religion: Explorations on Tibetan Grounds* makes its contribution here. Rather than framing our ethnographies and analyses as instances that reveal the (hegemonic) impacts of biomedicine in Tibetan contexts, we are interested in showing how this engagement works in (at least) two directions. Despite their dominance in international public health and clinical research systems worldwide, biomedical science and practices are being shaped and re-shaped through their interactions with diverse Tibetan settings. These modern Tibetan contexts – the milieu in which healing encounters, clinical research, institutional development and medical history play out – are further characterized by an intimate and interwoven connection between culture and religion. Similarly, Tibetan medicine, as it engages biomedical and scientific technologies and beliefs, is often re-envisioned in ways that reflect these translations of science.

The contributions to this volume explore the impact of Western science and biomedicine on Tibetan grounds – i.e., among Tibetans across China, the Himalayas and exile communities – as well as in relation to globalized Tibetan medicine. We discuss the ways in which local practices change,

how 'science' is undertaken and scientific knowledge is produced in such contexts, and how this continually hybridized medical knowledge is transmitted and put into practice. As such, this volume also reveals ways in which modern science is sometimes 'Tibetanized' within clinical and research practices around the world.

A *Sowa Rigpa* Sensibility

One of the key motivations for this book is to address the tendency to see the problems of encounter and translation between medical traditions as battle zones, in which, for example, using biomedical notions of disease or therapy means, *sui generis*, excluding Tibetan notions or vice-versa. Rather, each chapter in *Medicine between Science and Religion* helps to map the bi-directional, and sometimes multidirectional, flow of ideas and practices across medical worlds. Most ethnographic analyses of science and medicine in cross-cultural encounters begin with analytical frameworks adopted from biological science or social science methodology, which can presume an objectivist and empirical reporting of encounters without recognizing that the very notions of objectivity and empiricism are themselves already embedded in a specific kind of modernity and scientific discourse (Shapin and Schaffer 1989). In these accounts, biomedicine (as a normative ideal and, often, a locally specific set of practices) offers the analytical framework for comparison, as if the encounter with the 'other' on medical terrain always presupposes the need for an engagement with the biological sciences that derives first and foremost from a modern, Western viewpoint.

Instead of starting with the supposition that such translations of medicine across cultures must begin with, or emerge from, a biomedical frame, we adopt and apply an approach that begins with *sowa rigpa*. The 'science of healing' – as *sowa rigpa* is most often translated and used to denote the foundations of traditional Tibetan medicine – is our epistemological starting point, our orientation.[1] We chose the terms 'science of healing', from among the various possible translations of these Tibetan words , in order to deliberately complicate the notion of science itself, as we explain further below. We also chose this translation to distinguish our thread of analysis from what might be called the 'Mentsikhang model'[2] of standardized Tibetan medicine. Our use of the term *sowa rigpa* signifies more than the classical body of Tibetan medical knowledge, as expounded in the *Gyüshi* or the *Four Tantras*, to include other forms of Tibetan healing

knowledge and practices that have either become marginalized within modern institutions of Tibetan medicine or have been seen as belonging to the domain of 'religion'. We start from the position of troubling the notion of 'science' by making it the leaping off point for discussions of *sowa rigpa*, its epistemological grounds and its multivalent sensibilities. We argue that our appropriation of a *sowa rigpa* 'sensibility' facilitates an understanding of 'medicine' between 'science' and 'religion' in polysemous ways, which include being self-reflective of our own (Euro-American) points of view. Such a sensibility begins with the processes of looking at medical and social worlds – participating in them, empirically knowing them, and being conscious of their effects on health and well-being. In this sense, the concept of a 'science of healing' is appropriate for the territory we intend to chart, in methodological and analytical terms.

Given our focus in this volume on Tibetan medicine and its interaction with Western medicine or what we call 'biomedicine', a *sowa rigpa* sensibility becomes a useful analytical approach precisely because the deeper one reflects on the Tibetan words that comprise this phrase, the more complex translation becomes. The analytical concept of a 'science of healing' lends itself to multiple layers of epistemological exploration and commitment (Meyer 1981, Schrempf 2007a, Pordié 2008). *Rig*, as a signifier, has a host of meanings: from knowledge in general, to intelligence, from science to creativity. In Tibetan, *rigpa* or *rignä* refers to most scholarly fields of study available in monastic settings, including medicine. As a classificatory concept, then, it makes no distinction between scientific and religious knowledge. Similarly, *sowa* most commonly alludes to curing or healing; it also means to nourish, repair or comfort, and refers to 'health' itself. Together, the words signify a concept organized around the phrase's objective: to make well and complete. It brings together knowledge, intelligence and creativity in order to serve the goal of making health, healing, curing, nourishing and comforting achieve a balance that is both internal (bodily) and external (body in relation to environment). However, we also note that doctors of Tibetan medicine might define 'science' differently and in various ways.[3]

What emerges, then, from this close reading of the term *sowa rigpa* is a larger sense of meaning that makes *sowa rigpa* useful as a technique of analysis and practice, and a way of approaching our subject matter in this book. Specifically, we see the notion of *sowa rigpa* as a way of talking about what it is that our contributors do in their own work and analysis. Beyond this, *sowa rigpa* is a way of thinking about how to approach the study of any

medical system, not just Tibetan medicine. In sum, the fact that *sowa rigpa* emerges from the Tibetan vernacular is at once crucial and, in some ways, secondary. We suggest that other such epistemological starting points could emerge from other ethnographic contexts. For us, to begin here seems the most conceptually fruitful and methodologically sound procedure. Put another way, *sowa rigpa* is epistemologically subtle, crossing as it does the boundary between science and creative practice, between knowledge and experience. A *sowa rigpa* sensibility is efficacious both in its coherence and its permeability. Although one could argue that this may be true for most, if not all, medico-empirical traditions, we believe that *sowa rigpa* has particular qualities worth delineating.

In ethnographic terms, *sowa rigpa* is the phrase most often used by the diverse array of practitioners represented in this volume (and beyond) for what they practice. As we discuss in more detail below, the phrase also implies a moral framework which such practitioners abide by. In this sense, *sowa rigpa* orients us towards a fairly coherent set of theoretical and cosmological presuppositions that have held true among ethnically (and culturally) Tibetan healers for many centuries, across diverse geographic and cultural terrains. The phrase *sowa rigpa* is found in the *Four Tantras*, texts which forms the basis of Tibetan medical theory; it is also found in the ritual initiations given to some medical practitioners.

Here it is worth explaining to the non-specialist some of the basics of the 'science of healing'. An exegesis of Tibetan medicine, in its most basic forms of coherence, always begins with an understanding of the five cosmo-physical elements (*jungwa nga*) of wind (*lung*), earth (*sa*), fire (*mé*), water (*chu*) and space (*namkha*) in relation to the three *nyépa* of wind (*lung*), bile (*tripa*) and phlegm (*péken*). Commonly translated as 'humours', *nyépa* is more accurately defined as 'faults' or 'deficiencies' (for more on this, see Gerke, in this volume). Just as the five elements are integral to an understanding of the non-essential nature of all material existence, so too can the *nyépa* be seen as the underlying presence of a moral cosmology in material form (by way of *lä*, or *karma)*. According to the *Gyüshi*, the three *nyépa* correspond to the 'three poisons' (*dusum*) of Tibetan Buddhist tradition – ignorance, anger and desire – while the element of space is interpreted as consciousness (*namshé*).[4]

The choreography of interdependence between the *nyépa* and the five elements (in consort with the three bodily channels, or *tsasum*, and the seven bodily constituents, or *lüzung dün*) enable physiological function. A philosophy of cosmo-physical balance (or imbalance, as the case may be)

is reflected in methods of diagnosis, from the mechanics of pulse and urine analysis to the types of questions asked of a patient by a practitioner during an examination. Furthermore, Tibetan medicine is rooted in the idea that there are both proximal and ultimate causes of disease or imbalance. Therapeutic interventions are not only pharmaceutical (using formulas that combine animal, mineral and vegetal substances), but also dietary or physical (such as massage or moxibustion). Medical interventions can also emerge through ritual, from the performance of exorcisms to instructions in specific meditative or yogic practices or *mantra*. This aspect of Tibetan medicine has often been the most challenged by interactions with biomedicine, and as part of modernization and the politics of secularization occurring in different locales. Likewise, the production of Tibetan medicines and the training of practitioners often involve engagements in religious practice at a number of levels. Most *sowa rigpa* practitioners and Tibetan patients view Sangyä Menla, the Medicine Buddha, as the primordial source of Tibetan medical knowledge. As interaction with biomedicine increases, many of the wider practices that are associated with religion in Tibetan medicine are looked upon with more reflexive scrutiny.

At the same time, we recognize that *sowa rigpa* both refers us to and orients us towards a wide range of differences within what might be called a healing tradition, reflecting a tremendous adaptability to local environments, cultural differences, spiritual and practical resources for practitioners and patients, as well as larger socio-structural and even political demands.[5] In Tibet proper, one could historically and in the present find a huge variety of practices among healers – from individuals skilled in ritual or religious matters to those with practical pharmacological and compounding knowledge, from healers trained in monastic settings to those trained in a domestic tradition by a family lineage of practitioners. Expertise varies even though all such practitioners heal patients. There is, in fact, no generic Tibetan word for 'healer'. Various terms, such as *menpa* (literally 'the one with medicine' or 'doctor'), *amchi* ('doctor', a loan word from Mongolian), *mopa* ('diviner', specializing in ritual diagnosis and healing), *lhapa* ('oracle' or 'spirit medium', also specializing in ritual healing) and *ngagpa* ('Tantric practitioner', another type of ritual healing specialist, sometimes called an 'exorcist'), all refer to specific and distinctive bodies of knowledge and skill.

Despite these differences, the Tibetan practitioners we refer to in this book are all skilled in the *techne* – the art and science – of *sowa rigpa,* in the sense that they are informed by basic philosophical and cosmological tenets

of this healing science. We recognize, however, that even in Tibet historically and at the present time, there is and has been a good deal of contestation over what Tibetan medicine entails (or should entail), and which types of healing practices are considered legitimate, let alone 'scientific'. This emerges not only from processes of distinguishing professional boundaries, but also as a result of engagement with politics, with new forms of medicine, such as biomedicine, and with social trends, all of which challenge some techniques more than others. For example, healers who become possessed, such as *lhapa*, are often stigmatized by various authorities (namely, state or monastic institutions), while practitioners who adopt a radical materialist view towards the causes and conditions of illness or who are oriented explicitly towards a profit-driven approach to making Tibetan formulas might be lauded or reviled, depending on context.

In this volume, we see similar patterns of permeability and flexibility in the practices of *sowa rigpa*. Despite allegiance to core epistemological principles, there is a wide variety in what is emphasized in the practices of Tibetan medicine in different locales. In Russia at the turn of the twentieth century, massage techniques were emphasized among Tibetan medical practitioners (Saxer, in this volume). The focus on twenty-first-century United States is on the meditative and 'spiritual' aspects of Tibetan medicine (Chaoul, in this volume). In Xining (Amdo) in Eastern Tibet, medicinal baths are the most popular medical therapies (Adams et al., in this volume).

In her work on Traditional Chinese Medicine (TCM), anthropologist Mei Zhan proposes a process that she calls 'worlding' (2009) to describe how TCM has a presence far beyond its sites of origin in the world, and that its practitioners are self-consciously aware of the challenges and possibilities afforded by this expansion. We extend this argument here. The 'worlding' of Tibetan medicine reveals that it has the capacity to be shaped and transformed, adapting to local needs and expectations, while still holding fast to a coherent set of principles that define its epistemological foundations (Cuomu, in this volume). This quality of perseverance and flexibility points to what we identify as a *sowa rigpa* sensibility. We prefer this term to other analytical referents, such as 'modern', 'hybrid' or 'syncretic', because we wish to preserve the analytical distinction between medical sensibilities and their differential capacities to be flexible and adaptive on the ground. It is an epistemological distinction rather than a question of theory that we want to focus on, thus our use of the term 'sensibility' instead of 'theory'. In this reading or in our use of the phrase '*sowa rigpa* sensibility', we are not

implying that other medical traditions are not flexible or adaptive; rather, our focus in this text is on how Tibetan medicine shows these qualities in its own ways across a broad range of practitioners, geographic locales, and political, cultural and historical time frames.

Bates (1995), Kuriyama (1999) and Farquhar (1992), among others, have argued that the epistemological foundations of knowledge make a difference not only in how medicines are practiced, and how these practices heal, but also in how they help practitioners interpret and make sense of other kinds of medical practices in their midst. That Tibetan medicine is informed primarily by the idea of a 'science' or *rigpa* of healing gives it an adaptability which, we suggest, emerges from the wider context in which *rigpa* is a special form of knowledge and practice in Tibet more generally. To become knowledgeable in a *rigpa* – one of the many fields of knowledge taught inside and outside monastic settings by way of oral instruction, written texts and regular practice – also means becoming capable of living one's life differently. That is, for a wide variety of Tibetan practitioners, the acquisition of *sowa rigpa* is more than an intellectual endeavour, more than adding knowledge to an individual repertoire of expertise. Becoming knowledgeable in *sowa rigpa* is ideally a way to become skilled at a certain way of life. Saxer and Kloos refer to this in their chapters. They explore how, in entirely different historical times and places, Tibetan medicine has been about a 'practice of living' for various types of healers that, when done well, has also been a way of keeping other people living, and living healthily.

If we understand *sowa rigpa* as an epistemology, it bears resemblance to Max Weber's portrayal of modern science as 'a vocation'. More than a set of truth claims or facts, science was, for Weber, a way of looking at the world and a way of being in the world. We suggest the same is true for those who undertake *sowa rigpa* as a way of life and it is what we hope to identify as a methodological and analytical starting point for comprehending Tibetan medicine in this volume. This is not to say that all practitioners are skilled, trained or capable in the same ways, or that there are not differential capabilities among practitioners. Rather, it is to suggest that perhaps *rigpa* implies a different kind of engagement with knowledge than is typical for biomedical or Western forms of science precisely because it simultaneously suggests an experiential notion of knowledge, combined with a strong ethics and morality that defines a good healer. While it is clear that all medical traditions expect some sort of expertise and vocational will (including ethical will) from their practitioners, the distinctions between these domains of expertise and will are significant, in both form and substance.

The notions of resilience and coherence – of internal perseverance despite widespread variability and local adaptability in its practices – that are encompassed by *sowa rigpa* resemble in some ways the kinds of engagements with the world espoused by Buddhism more generally. Historians of science suggest the same kind of resilience and perseverance is true for modern science (Kuhn 1970). But the content differences matter: holding fast to the truth of the five elements, the non-essential nature of life, the perceptual basis of emotions etc., might be thought of as making sense in a coherent knowledge system while enabling flexibility and individuality in a manner that differs radically from biomedical science. Although encounters and translations between these forms of knowing the world, and of healing, create novel points of overlap and raise interesting questions, we suggest in this volume that one of the undeniable consequences of the worlding of Tibetan medicine is that this *sowa rigpa* sensibility becomes visible to, and is practiced by, new audiences in new ways.

The chapters of this book show that when faced with the challenges of engaging with biomedicine, professionals of Tibetan medicine are often able to absorb and restructure while continuing to adhere to basic Tibetan medical principles. Sometimes this is visible in the ways that practitioners diagnose patients, attending to local problems and *nyépa* logics of suffering. At other times it is seen in how Tibetan doctors and researchers make sense of new technologies (such as the use of animal testing, laboratory chemistry, etc.) to affirm or test the efficacy of Tibetan medical practices (Adams et al., in this volume). It is visible when practitioners insist on using ritual means of ensuring potency even when such practices are rendered irrelevant to biomedical researchers (Craig, in this volume). Sometimes a *sowa rigpa* sensibility emerges not just in practitioners but also in patients when, for example, consultation with diviners is assumed to be as efficacious as obtaining antibiotic injections with syringes (Schrempf, in this volume), or when labouring women assume that it is 'safer' to deliver at home than in a clinic because of their knowledge of how to protect themselves from the potential risks of delivery (Gutschow, in this volume). Sometimes, a *sowa rigpa* sensibility is visible in practitioners' willingness to make use of biomedical terminology to appease client expectations and to engage in acts of translating between medical worlds (Gerke, in this volume). Most strikingly, it becomes visible in biomedical research projects that try to make randomized, controlled 'sense' of Tibetan theories of the *nyépa* or the benefits of Tibetan therapeutic techniques (Chaoul, in this volume). We might call these instances of the 'worlding' of not just Tibetan

medicine but of *sowa rigpa* itself. The complex process of making sense of medical claims and evidence across cultural worlds is shown as one that is deeply invested with broad epistemological claims, even when there is disagreement about such claims (Cjaza, in this volume) and even when they require practitioners to re-imagine and re-invent their own practices in new ways (Kloos, in this volume). The chapters of this book reveal a kind of flexible and enduring sensibility that is perhaps more 'built-in' within Tibetan medical starting points than it is in other traditions.

The chapters in this volume explore how to study not only contemporary Tibetan medicine but also medical systems more generally, insofar as they offer insights in relation to epistemology, claims about truth, and particularly an approach to studying efficacy. Even suggesting the notion of an internal coherence that absorbs, adapts and conforms to the exigencies of its local practices resists epistemological similarity with what are conventionally taken to be biomedical, scientific modes of truth-making. As documented by numerous social theorists of science such as Thomas Kuhn, Bruno Latour and Sandra Harding, modern science quite often forgets or loses sight of its past, burying older theories to make way for the new. In comparison, Tibetan medical adherence to its foundational theories might seem somehow 'unscientific' to the Western mind. Where biomedicine often progresses by displacing foundational theories, or modifying them to be virtually unrecognizable (from cellular theories to genetic theories, for example), Tibetan medicine tends to aggrandize its knowledge production by sustaining the coherence of its core principles, making room for the accommodation of new knowledge by fitting it into pre-existing frameworks. Although one might argue for more similarity across medical traditions with regards to ideas about flexibility and change (for example, that Aristotelian notions foundational to Western medicine are as present in modern biomedicine as Tibetan theories are in contemporary Tibetan medicine), we argue for a more subtle reading of the differences that could be seen as epistemological. Innovation in Tibetan medicine often involves the upholding of traditional insights (in fact, double checking with pre-existing literature is a priority for Tibetan medical researchers), and this referencing of past truths gives Tibetan medical efforts at modernization a different feeling than one finds in most Western scientific endeavours, yet must be considered scientific in its own right. Thus, starting with a notion that emerges from within Tibetan traditions might help us move beyond the science versus non-science debates that so often surface in discussions of 'modern' versus 'traditional'

medicine, while also proposing a model of efficacy that hinges on different notions of truth-making.

In addition to the ways in which this volume contributes to social studies of science in a general sense, it also addresses the relationship between science and religion, and science and Buddhism, particularly in the Tibetan context. Garrett (2008) notes that from the 1980s onwards historians of science moved away from the shortcomings of a 'conflict thesis' between science and religion towards accepting a 'complexity thesis'. She concludes that in both Tibetan and European history 'the definitions of science and religion and the relationships between them are in flux and inherently contextual' (2008: 5). However, as Lopez (2008) points out, the development, proliferation and appropriation of Buddhism in the past 150 years are marked by its modernist orientation – the sense that it is a science or a philosophy, rather than a 'religion' in the classical sense. This view brings with it multiple dangers, particularly the simplification of something that is much richer and broader in scope, i.e., a lived religion in all its complexity, into a somewhat sanitized and universalist 'philosophy' or, as has become popular today, a 'science of mind' (ibid.). Yet, somewhat paradoxically, the understanding of Buddhism as a 'science of mind' might also facilitate how many Tibetan doctors view their medical practices today, including the worldly value of such practices.

One might also be swayed by the ethnographic pull towards seeing a secularization of Tibetan medicine in China and a scientization of Buddhism in the West, as these have been documented in ethnographic and historical accounts. These insights themselves bring to the forefront questions about the attempts to understand religion as science and science as religion while at the same time holding them to be dichotomous. Our inquiry hopes to make productive use of this problematization itself, noting that ethnographic record shows evidence of both. There is as often slippage between medicine and science as there is evidence of totalizing claims for their differences, often for reasons that often have more to do with politics and social practice thanwith medical or clinical stakes.

Scholars of medical anthropology, the history of medicine, and even Tibetan studies have often been weighed down in thinking about and making sense of medical pluralism, particularly by focusing on patient-doctor interactions and diagnostic rationalities, setting medical epistemologies in a framework of competition, so-called 'hierarchies of resort' (Romanucci-Schwartz 1969) or hegemonic effacement. Meanwhile, social studies of science and globalization have explored how different

knowledge systems come to engage with each other, and what the stakes are for people involved, within the context of larger political, economic, historical and cultural forces (Nandy 1990, Marglin and Marglin 1996, Prakash 1999, Verran 2001, Latour 1984). While some scholars have undertaken studies of medical systems in relation to these issues (Leslie and Young 1992, Langford 2002, Farquhar 1992, Cohen 1998), we see a need to invigorate the study of medical pluralism and ethnomedicine with more of the insights emergent from the cross-disciplinary efforts this book represents. Thus, we explore in this volume the interactions that emerge through the perspective of practitioners, patients, and their many conceptualizations and theories, as well as through an understanding of the material substances they use.

Still, even studies of traveling science often overlook the possibility of engaging local epistemological framings that may be most suitable to the ethnographic materials they hope to study. Our approach is to the use a concept that emerges from the ethnographic focus of our work in order to make sense of the materials we venture into in these chapters, in part as a way of suggesting future directions in our field. That our volume illustrates how Tibetan medicine becomes a partner with biomedical sciences – in some sense 'Tibetanizing' these practices of science – suggests that this starting point is consistent with what we see ethnographically.

Between Science and Religion: Focusing on Tibetan Medicine

One might ask why we have chosen in this volume to focus on what, at first glance, might seem like only one cultural system of knowledge and practice and its relation to and with biomedicine. We could answer such a question in two ways. First, we might reiterate that neither Tibetan medicine nor biomedicine are complete or uniform categories; they articulate in diverse ways across geographic and epistemological spaces. Second, although an edited volume of this nature could have engaged with several so-called Asian medical systems, we have chosen to focus on Tibetan medicine for several reasons. Primarily we believe that an intellectual commitment to one already diverse set of medical, social and scientific practices across a wide geographic and epistemological terrain encourages a certain kind of theoretical depth that is not possible when engaging in a more comparative exercise – not only between biomedicine and its 'others' but also across

different non-Western medical systems. Furthermore, Tibetan medicine is not only known as a scholarly medical tradition (see Bates 1995) with many centuries of technological, clinical and pharmacological innovations; it also survives today as a complex medical resource across many Asian nations – from India and Bhutan to Mongolia, China, Buryatia, Russia – as well as in Western Europe and the Americas. Furthermore, as each chapter illustrates, Tibetan medicine's own stories about its engagement with both other Tibetan healing traditions and Western empirical traditions is quite rich and worth exploring for a comparison with structurally similar Asian medical transformations in the future.

Thus, by focusing solely on Tibetan medicine, we offer an interesting glimpse into the complexities of working through an analytical framework that distinguishes 'religion' from 'science', despite the heuristic use of these terms in the title. For the purpose of this exploration, Tibetan medicine includes belief in spirits and protective *mantra* (Schrempf, in this volume) and the efficacy of exorcism and empowerment rituals (Craig, in this volume) to the practices of ascertaining quality of life inventories by way of biochemical stress tests, the absorption of Tibetan medicine in animal model laboratory research (Adams et al., in this volume), and the ethical posturing of exile physicians for whom medicine becomes a key to saving Tibetan culture and benefitting the world (Kloos, in this volume).[6] We suggest that the connections between these practices of medicine do not simply cohere around those theories of the *nyépa* or the 'five elements', although these are at some fundamental level connected to all of the practices we describe in the following chapters. Rather, we suggest that these diverse practices coalesce around what we call a 'morally charged cosmology', which is not simply Buddhist and yet is deeply rooted in Tibetan cultural concepts. Again, we are not claiming that other medical traditions are without a strong ethics or moral sensibility, but rather that our attention is on the particular contours of that which fall between religion and science, which emerge as rich, if problematic, categories in the case of Tibetan medicine. The chapters in this volume explore in more detail what we mean by such a morally charged cosmology, and what goes into claims that Tibetan medicine is, in fact, situated between religion and science. We also explore the complications of such a claim. For example, we note again that even translating the phrase *sowa rigpa* as 'science of healing' could appear problematic today because it recalls the distinction between religion and science. But, we argue, the translation would not necessarily be a problem for a Tibetan practitioner or a patient, or at least not in the same way as it would be for basic scientists or biomedical practitioners.

It is also important to remember the powerful role played by 'religion' within Tibetan cultural life. In this text, 'religion' encompasses everything from what might be referred to as folk beliefs and practices to the highly liturgical and literary aspects of monastic Buddhism in Tibetan society, as well as to other Tibetan religious traditions such as Bon. For these reasons, we prefer the phrase 'morally-charged cosmology' to that of 'Tibetan Buddhism'. Given the underlying, though historically and contextually changing, connections between Tibetan religious and medical praxis, the very nature of this work requires an engagement with, and a reconsideration of, the facile religion/science dichotomy. The question of how religious this makes Tibetan medical practices themselves, however, is not easy to answer, and is one taken up by a number of the contributors to this volume.

Indeed, despite the large role played by Buddhism in Tibetan medical theory, particularly since the monastic institutionalization of Tibetan medicine from its inception and the culmination of this through the founding of the Chakpori Institute in 1696, it would be wrong to consider Tibetan medical theory to be purely religious, or purely Buddhist. However, one might refer to it as uniquely 'Tibetan' in the sense that it is re-produced in a culturally Tibetan environment and encompasses the breadth and range of various cultural and religious orientations found within that larger category and label. It is important to also call attention to the overriding presence and significance of the *Gyüshi* and its commentaries for at least the last three centuries. Many texts have played an important role in the shaping of Tibetan medicine in the Tibetan cultural world. But the *Gyüshi* has become increasingly taken as foundational for the past centuries, even more so today. The debate over this text's religious versus scientific content is already large and complex. Similarly, the practices of biomedical science – particularly at sites, both historic and geographic, where these two systems of knowledge have been integrating – has created a self-reflexivity with regard to the definition of 'science' in ways that reveal an expanding discourse about the ways in which new medical techniques and practices accompanying modernization need to accommodate Tibetan medical ways of knowing. This, we argue, is, reflective of how medicine on Tibetan grounds is operating between religious and scientific epistemologies, at least as they are known to most Western scholars, and informs them both.

In this sense, the type of clear epistemological and political border between 'science' and 'religion' that is often viewed as a Western materialist (and, significantly, socialist Chinese) ideal is complicated in the Tibetan

case. This fact creates both problems and opportunities – points of convergence and disjuncture – as Tibetan medicine comes into dialogue with biomedicine in particular. Indeed, there is a history to this. Most significantly, 'religious' elements of *sowa rigpa*, and inquiries into practices of medical pluralism on Tibetan grounds more generally, are capable of revealing dynamics in which empiricism demurs to politicized and culturally embedded visions of 'science'. As the chapters in this volume illustrate, boundaries between the ideological domains of 'religion' and 'science', as they are enacted through medical practice, are formed for reasons that have much to do with politics, nation building, economics, and other regimes of power and comparatively less to do with questions of epistemology, efficacy and empiricism.

It is also important to remember that the religious foundations of Tibetan medicine are by no means restricted to monastic settings. There are two great traditions of pedagogy in Tibetan medicine: institutional (including monastic settings and later more secularized institutions such as the Mentsikhang), and lineage-based (in which 'lineage' sometimes refers to religious lineage, family/patrilineage and/or teacher/student lineage). And yet numerous healers specialize solely in ritual divination, exorcisms or amulet provision, and claim to know little about making and practicing 'medicine' (*men*) in a broader sense. Others are skilled in the arts of compounding medicines or diagnosis but have never learned to perform ritual healings requiring communications with spirit beings. In addition, many ritual specialists can be found outside of the monastic context. *Ngagpa*, for example, are a class of ritual specialists often translated as 'tantric householder priest' who, despite existing outside of monastic settings, have received transmissions (*lung*) and initiations (*wang*) from teachers, sometimes including those who specialize in *sowa rigpa,* and therefore have the ability to perform and prescribe both 'medical' and 'religious' therapies. Despite the fact that these practitioners are differently skilled, they are unified by their common world-view of a morally charged cosmology. Even those who compound medicines and who know no rituals and have no formal Buddhist training presume that the five elements that make up the cosmos, as well as the astrological guides used to understand the potencies of ingredients on the basis of these elements, are real and have internalized this cosmology.

One also glimpses the coherence of this cosmology among patients. A moral cosmology is not just theoretical: it is visible in how people in culturally Tibetan contexts can move throughout the world – in how they

eat, how they behave, and the assumptions that their actions produce good or bad health. Yet it is not only Tibetans who come into this cosmological sphere, although according to diverse contexts it might be controlled by very different agents, such as local spirits afflicting illness or biochemical germs. Cancer patients in the U.S. learning Tibetan meditation, the Chinese laboratory chemist who learns how to evaluate the 'heat' in a medicinal ingredient, or a Tibetan patient who trusts IVs as 'cooling' agents against a 'hot' disorder – all are in contact with, and engaging with, a moral cosmology that comes from Tibet and that circulates in and through Tibetan medicine.

The Complexity of Encounters: Tibetan Medicine meets Biomedicine

The idea that Tibetan medicine, as a unitary or singular system, is encountering biomedicine, as a separate system or tradition, is as problematic as assuming a simple dichotomy of science/religion. The heuristic use of 'biomedicine' and 'Tibetan medicine' in these pages is overwritten by ethnographic and historical evidence which shows that there is a continuum of mutual interaction between these varied traditions that makes it impossible to see them as entirely discrete systems of medicine today. Indeed, the Tibetan medicine that we see today is nearly always already in conversation with a variety of other traditions, and it is itself an inherently integrative, composite set of diverse medical knowledge and practices to begin with (Dummer 1988, Meyer 1981, Pordié 2008, Samuel 2001). Tibetan medicine continues to be an assemblage, a result of socio-cultural processes of accretion, borrowing and change. These chapters show the unstable terrain of empiricism and epistemology in this process, in the sense of there being ongoing translations back and forth from history and in the present between medical traditions of many sorts.

Nevertheless, we need a way to account both for history and for the idea that Tibetan medical practitioners have had to become self-conscious of their differences as well as their commonalities with biomedicine. Biomedicine demands this kind of self-reflexivity, as is classically true of modernity (Langford 2002). Pordié writes that one finds a certain 'neotraditionalism' at work among those who want to claim the space for a traditional Tibetan medicine, by which he means a revival of tradition as a self-conscious claim to traditional versus modern Tibetan medicine (2008:

7). In this volume we often see that Tibetan medicine is not organized around such a strategic essentialism, but rather around a dynamism of form and technique, and even around theorizing about how to be efficacious. We sense a more grounded and practical engagement with biomedicine that subordinates debates about what constitutes 'authentic' Tibetan medicine for more pragmatic discussions about what cures work the best to heal patients in specific contexts or with specific diseases.

Still, it is worth noting that there is a point to the heuristic distinction which Pordié highlights, insofar as there have been and still are different levels of historical engagement with biomedicine and with concepts of the 'traditional' within *sowa rigpa* practice; the degree of this engagement has varied, depending on the type of practitioner, the location of practice and the purpose of their work. Today, Tibetan medical ideas and techniques are engaging with Western biomedicine at a number of levels and locations: from the public health practices and pharmacies housed in rural Tibetan clinics to the design and implementation of randomized controlled trials (RCT) on Tibetan therapies to be conducted in China, India or Western locales. These engagements are different still from those emerging at the turn of the twentieth century, as McKay details. We might consider, in fact, three successive waves of Tibetan encounters with biomedicine, while remembering that 'biomedicine' does not constitute an essential, uniform set of practices or knowledge. Let us elaborate on each of these 'waves'.

The First Wave

The turn of the twentieth century saw Tibetan practitioners travelling to foreign lands and delivering medical services in these new locations in conversation with, and sometimes absorbing features of, 'scientific medicine', as it was understood at that time. These initial modern encounters constitute the 'first wave'. This was of course in the context of historical engagements with other medical traditions (particularly Ayurvedic practitioners in northern India and Chinese medical practitioners at the edges of the Tibetan frontier). Similarly, early Western medical encounters occurred in Tibet by way of the British as well as some missionaries, the latter being an area which is less explored in existing scholarship (see McKay 2007). Although there may not have been a deep intellectual engagement between biomedicine and Tibetan medicine during the colonial British encounter (yet this may have been more true in modernist Russia), we are shown that a transfer of technology and knowledge was occurring. The first section of this volume covers much of this ground.

The Second Wave

We demarcate the 'second wave' of intensive interaction with 'scientific' medical models as the period from the 1950s onwards, when political changes orchestrated by Chinese socialism brought with them a wide variety of biomedical resources to Tibetan areas. Hospitals, clinics, the barefoot doctor movement, and new medicines and technologies were all introduced directly into urban and rural Tibetan communities over a fifty-year period. These reforms also included a direct revision of Tibetan medicine through Chinese biomedicalization, the re-training of Tibetan physicians as barefoot doctors, the attempt to eliminate important parts of the theory of Tibetan medicine on the grounds that it contained religious or superstitious elements, and the structuring of a hospital system that was modelled on the biomedical resources emerging throughout China (Janes 1995, 1999). The initial experiences of Tibetan displacement and exile in India, on the heels of India's independence, and at a time when the country itself was reframing medicine and public health in post-colonial terms, also came to bear on how the Men-Tsee-Khang, reestablished in Dharamsala in 1961, began to interact with biomedicine and Western science.

The Third Wave

A 'third wave' of interaction with biomedicine began near the turn of the twenty-first century. This period is marked by a simultaneous attempt to revitalize and globalize Tibetan medicine through actions like the building of new pharmaceutical factories and new colleges, and new kinds of engagements with Western scientific models for research. In some ways this last wave is marked by the trends that are more generally and universally emerging in global health, particularly the growing emphasis on pharmaceutical research and the market driven nature of Tibetan medicine's travels to areas beyond the Tibeto-Asian sphere. The third wave is expansive, vast and certainly not uniform but has the appearance of being totalizing in this expansiveness (from clinical trials on the efficacy of meditation to the effectiveness of empowering medicines for a clinical trial). The deep intellectual engagement between practitioners that was missing from the early colonial and missionary encounters with biomedicine is today a fundamental premise for the work that is documented in the chapters in this volume.

Translations

The idea of 'translation' that emerges in these chapters is complex. Fundamentally, translation is defined as an act of encounter and conversation, but in its nuances can mean assimilation, correlation, insertion, syncretism, replacement, antagonism, complementarity and more. These processes draw our attention to the stakes of interaction at numerous levels, beginning with language and moving quickly to questions about epistemology, validity, truth and efficacy.

It is important to remember that many of the debates about validity and truth that become visible in encounters with biomedicine are not without historical precedent. Earlier debates among scholars trained in Tibetan medicine were generated by encounters with biomedicine, such as attempts to anatomically locate the 'channels' (*tsa*) or to find physical correlates of *nyépa*. For example, Gyatso (2004) identifies historical deliberations among Tibetan scholars concerning the relative merits of truth claims surrounding the 'invisible' aspects of Tibetan physiognomy imported from Buddhism (*nyépa*, *tsasum* or 'three channels', or *namshé*, 'consciousness', etc.). Even discussions over the relative role that should be played by religious interpretations versus empirical observations are not new to Tibetan medicine, but rather date back to the seventeenth century when there were debates between the Janglug and Surlug lineages of medicine (Meyer 1992, Gerke 1999, Hofer 2007, Garrett and Adams 2008). Indeed, there is an ample literature on these contestations over empiricism within Tibetan medicine and scholarship (Gyatso 2004, Garrett 2007), some of which re-emerge in the context of translational acts between *sowa rigpa* and biomedicine today.

In addition, the essays herein suggest that translation is itself configured by a variety of forces. One of these forces is the internal culturally grounded and knowledge-based epistemology of Tibetan medicine. Some of the chapters make it clear that epistemological orientations structure the extent and scope of the translatability of medicine. Specifically, whereas biomedicine seems to have a greater problem with reconciling Tibetan medicine-oriented objective realities, Tibetan medicine seems more able to adapt to different circumstances and yet retain an epistemological and practical constancy that is not unmoored by moving contexts. This refers back to the notion of a *sowa rigpa* sensibility. For example, we note that it is possible for Tibetan doctors to speak to the psychiatric patient, holding forth in a narrative of clinical engagement that resembles Western notions of psychiatry with Western patients who need this form of engagement,

while using more pragmatic and reductionist forms of physical diagnoses with Tibetan patients (Samuel 2001). We can think of comparative cases, in which biomedicine seems less capable of shifting modes of engagement and reconciling diverse epistemological claims. For example, biomedical researchers might be able to embrace the logic of 'meditation' practices as having benefit to patients (Chaoul, in this volume), but seem less capable of acknowledging the material and empirical effects of things like 'blessing' medicines (Craig, in this volume).

The problem of epistemological openness, in the context of translation, relates to efficacy. Notions of efficacy become intertwined with the languages that are used to name specific practices, measure outcomes and construct notions of etiology. Whether or not practitioners use substitution or correlation, or whether they simply use vernacular terminology, letting language be the placeholder for expanding and augmenting medical repertoires matters in relation to how efficacy is known and experienced. At the same time, it is simplistic to assume that these translational practices are only structured by internal epistemological positions (or at an individual conscious level only). On the contrary, other forces influence this process of translation. Politics and social movements, from the legacy of the Cultural Revolution to the regulation of the FDA or the marketing objectives of a clinical trial, the identity politics of exile Tibetans, or even the contexts of medical colonialism that outlaw certain practices simply because they represent political competition, all come into play in these processes.

The adoption or rejection of medical practices is seldom solely a result of clinical efficacy, empirical observation, or patient experience. Questions of efficacy are also the result of socio-political forces and conditions that make one kind of translation, one kind of observation, not only possible but also more valid than another at a given time. In the effort to decide upon efficacy, many translational practices must occur; these translations are limited (or enhanced) by such things as language capacity, technology and context (Czaja and Gerke, both in this volume). Bilingualism or trilingualism enables doctors and researchers to move more fluidly between languages and concepts, but deep knowledge of language can also make meaning more difficult. Sometimes practitioners' substitution of terms such as 'haemoglobin' or 'high blood pressure' for Tibetan words in the process of diagnoses actually implies a re-signification of these biomedical terms because their use is better known to and thus more efficacious for a patient. In other words, these acts of translation are not an importation of some 'pure' or accurate rendering of biomedical concepts into Tibetan medicine.

Similarly, limits to translation emerge from a variety of circumstances: some technologies, medicinal ingredients, ritual instructions, or even diseases simply do not exist in practitioners' repertoires. Moreover, clinical interactions are structured by what doctors believe their patients know or can process. Lay understandings of medicine seldom correspond exactly to practitioners' understandings in any medical tradition, and in the translational context of a clinical encounter, these discrepancies can structure both language and practice. Tibetan physicians might use ultrasound technologies to affirm their diagnoses and assuage patient expectations for a kind of 'modern and scientific' encounter, but this does not necessarily mean that Tibetan medical practices have been colonized by biomedical science. Translational practices are multifarious and generate processes of mutual interaction between medical techniques that need not fundamentally undermine either one. We recognize the multiple ways that determinations of efficacy and expressions of medical evidence are structured by epistemological, political, social and other contexts. We also draw attention to the way in which it is often the 'miracle' of efficacy that convinces some to keep Tibetan medicine alive and even in recent history to call it 'science' in the Enlightenment sense of the term. Mei Zhan (2001) makes a similar argument with reference to transnational Chinese medicine.

A number of chapters in this collection elucidate how claims of efficacy accomplish a great deal, and that the outcomes of such claims do not inevitably lead to a reductionist or simplified use of Tibetan medicine. We have seen that biomedical clinical trials tend to reduce Tibetan medicine to a set of pills, formularies and treatments that are easily inserted into otherwise entirely biomedically conceptualized disease and treatment models (Adams and Li 2008, Craig 2006). Criticisms of these approaches focus on the effacement of other aspects of Tibetan medicine that appear unfathomable in biomedicine (such as theories of *nyépa*). But sometimes the reverse occurs; sometimes it is precisely what we might call the 'spiritual' aspects of Tibetan medicine that are the focus of study and healing outcomes (Samuel 2007). In fact, there is a large and growing field of research that attempts to bridge the fields of Western science with Tibetan religion. Beginning with researchers like Herbert Benson, who looked at *tummo* or subtle body practices beginning in the 1980s, and extending to the Mind-Life Institute's current research and explorations between Tibetan Buddhism and neuroscience, such research agendas are specifically invested in creating new pathways of translation between two different philosophical and epistemological worlds, yet usually entail Western appropriations of Tibetan Buddhism.

The attraction of what many Westerners call the 'mystical' or 'spiritual' elements (while many Tibetans would call it 'religious' elements) of Tibetan medicine plays an important role in the engagements between Tibetan medicine and biomedicine, but are for the most part not seen as integral to medical practices in either world. And we suspect a certain limitation even in this work. In the first place, Tibetan religious practices tend to be the focus, rather than Tibetan medical theory, much of which offers explanatory empiricism that is entirely overlooked (Cuomu, in this volume). In addition, there is a tendency to see the spiritual aspects of Tibetan practices as the part that is 'on top of' or 'additional' to science versus the idea that what might be called the 'mystical' elements are actually integral to Tibetan theories of physiology that account for a therapy's effectiveness. The empirical efficacy of ritual practices relies on a set of assumptions about cosmology which are also frequently overlooked (Schrempf, in this volume). We noted above, for example, that researchers are able to study the psychological benefits of meditation and neurological changes in biochemistry, for example, but they are less likely to be interested in or able to study the biological processes that might explain or elucidate whether or not meditation or other ritual practices reduce things like tumour growths. This is partly because they are not invested in making the subtle translations between theories of physiology and elements and *nyépa*, cells, molecular structures and the like.

Conclusion

Within the multifarious engagements between biomedicine and Tibetan medicine over history and into the present, questions about empiricism, epistemology and efficacy, as well as negotiations surrounding the political nature of scientific 'truth', are taking place. While obvious strains have been put on the Tibetan 'science of healing' to accommodate biomedical ideas and practices, Tibetan medical practitioners are also participating, even actively shaping, encounters with biomedicine and Western science. Instead of merely effacing Tibetan medical theory with biomedical ideas and practices, or ignoring cultural elements of Tibetan medical praxis that do not fit within a materialist frame, our authors write about instances in which a range of Western scientific practices and epistemological positions are being made to accommodate not only elements of Tibetan medical theory, but also culturally Tibetan ideas about the nature of causality, the

definition of health, and the role of the healer-physician in society. There is a synchronic and diachronic way to express these engagements. There is a reason why, at contemporaneous moments, people in the U.S. are interested in meditation while people in Amdo are interested in IV injections and syringes, and why, in both instances, they are turning to Tibetan practitioners to address their concerns and meet their needs.

In this volume we are also concerned with how the definition and scope of 'Tibetan medicine' is being reshaped in national and global contexts, moulded to suit a variety of social, political, economic and even ecological conditions. The main contribution of this volume, then, is to provide examples of how and why scholars, researchers., and medical practitioners are discovering that making 'sense' of the translation effort between these systems requires adopting a culturally Tibetan way of *doing science* – perspectives that demand an engagement not only with the rubrics of Tibetan science (*rignä*), but also with ideas and practices emergent within Tibetan cultural frameworks and moral world-views.

The volume is organized into four parts, each of which begins with a brief essay introducing the conceptual themes found in the chapters therein. The first part, called 'Histories of Tibetan Medical Modernities', features a chapter by Alex McKay, whose work is situated in early twentieth-century Tibetan encounters with biomedicine by way of the British, and Martin Saxer, who documents Tibetan medicine's early travels beyond Tibet into a modernizing and 'scientizing' Russia. Although there are well-known scholars of the history of Tibetan medicine (such as Frances Garrett, Janet Gyatso and Christopher Beckwith), their works have remained primarily oriented towards philology. The contributions by Alex McKay and Martin Saxer offer new ethnographic histories that account for the complexities of encounters between medical practices and British or Russian figurations of modernity. They serve as an excellent starting point for the volume in the sense that they undermine notions of essential medical traditions as much as uniform encounters between them.

The second part, 'Producing Science, Truth and Medical Moralities', starts with Stephan Kloos' chapter on the Men-Tsee-Khang in Dharamsala (India). Kloos identifies the impact of biomedical modernization on *amchi* practitioners as a problem that redirects their sense of the 'ethical' in and through traditional ideas of culture and religion. The following chapter by Vincanne Adams, Rinchen Dhondup and Phuoc Le shows how efforts to integrate biomedicine and Tibetan medicine in Xining (Amdo/Qinghai) result in processes that refigure both biomedical and Tibetan practices of

medicine and therapeutics. Barbara Gerke's insightful and ethnographically based work reveals some of the complexities of translating between two medical frameworks, and the ways in which this process reconfigures meaning in two directions among practitioners in Darjeeling, India.

The third part, 'Therapeutic Rituals, Situated Choices', focuses on the dynamics of clinical encounters that are defined by medical pluralism at the level of diagnosis and treatment choices as well as notions of causality, potency and efficacy. This part begins with a chapter by Mona Schrempf, who documents the ease with which biomedical and Tibetan spiritual therapeutic treatment options come to be aligned in Amdo/Qinghai. Kim Gutschow analyses the complex politics of biomedical and traditional options for reproductive health care among delivering women in Ladakh. Sienna Craig, working in Lhasa, identifies the powerful rhetorics of efficacy that become contested and reclaimed as biomedical science offers to validate Tibetan medicine by way of randomized controlled clinical trials, and as Tibetan medical practitioners respond, in kind, with alternate systems of validation.

The final part of the book, called 'Research in Translation', presents chapters by those who are invested in the world of research. Mingji Cuomu offers a formal discussion of the principles of research and epistemology from the perspective of a Tibetan medical practitioner. Olaf Czaja's work documents a conference held in Dharamsala among doctors of Tibetan medicine that attempted to show Tibetan medical effectiveness for treatment of cancer and diabetes. As his work demonstrates, this process is full of complexities and translational dilemmas. Next, Alejandro Chaoul presents a compelling case of how to translate Tibetan meditative practices into a clinical trial on cancer treatments in the U.S. Last but not least, we conclude the volume with an epilogue by Geoffrey Samuel, whose insights on Tibetan medicine have, either directly or indirectly, held an important place in all of the contributors' work. Samuel summarizes the volume's scholarly contributions and opens up future ways of researching a *sowa rigpa* sensibility.

Notes

1. We note that this use of the idea of 'orientations' is different from Samuels' discussion of pragmatic, *karmic* and *bodhi* 'orientations' within the context of Tibetan religious practice and literature (1993: 26f).

2. This 'Mentsikhang model' refers to the forms of Tibetan medical knowledge and practice that were first articulated in the early decades of the twentieth century in Tibet and that have been deployed in both the Tibetan exile communities (for which we use a different Anglicized spelling, i.e., Men-Tsee-Khang) and through state-sponsored Tibetan medicine in China since the 1950s and 1960s. In both contexts, this model has hinged on the development of standardized and state-approved medical curricula and courses of study, as well as licensing and certification procedures for Tibetan medical practitioners and medicines themselves. Also, biomedical influences are likely to be more prominent in this kind of Tibetan medical practice than in the older 'lineage model' of Tibetan medicine (Schrempf 2007b: 93).
3. Doctors of Tibetan medicine from the Dharamsala Men-Tsee-Khang also translate 'science' as *tsenrig*, as distinct from traditional Tibetan knowledge. In some instances, 'Western science' was dismissed altogether as 'dangerous' because of its standardization that stands in stark contrast to the individual constitution of the three *nyépa* in each body and to the 'profound' approach of Tibetan medicine based on religion. It might be worth noting here that the translation of *rigpa* as 'science' arose out of a particular and widespread mind-set based on modern Buddhism which tried to legitimize ('ancient') Buddhist, and in particular Tibetan, knowledge by relating it to present 'Western' science (see Lopez 2008). However, we try to avoid this dilemma by analysing how practitioners of Tibetan medicine themselves have engaged in using (Western) science and sometimes also 'religion' – in the sense of equating or correlating ideas, such as the interpretation of the three 'faults' or 'deficiencies' (*nyépa*) as 'poisons' (*du*) – as well as drawing upon Tibetan etiologies, diagnosis and treatment methods, such as *karma*, ritual, *mantra*, amulets and astrological calculation, in order to prove the efficacy of Tibetan medicine and thus mark their medical tradition as equally if not more valuable than biomedicine.
4. Indeed, Pordié (2008) aptly addresses this plurality of practice and asks if we should not consider the term Tibetan medicines instead of Tibetan medicine.
5. There are only a handful of Tibetan medical texts dating to the Tibetan Imperial period (seventh to ninth centuries), yet Tibetan medical historiography, as expounded in the *Gyüshi*, dates the authorship of this standard medical text back to Yuthok Yönten the Elder, a mytho-historical figure who presumably lived in the eighth century. While Tibetan historiographers of Tibetan medicine nowadays acknowledge early Bon influences, historically speaking the *Gyüshi*–a compilation of older texts–has to be dated to the twelfth century only. Nevertheless, at least since the time of Sakya Paṇḍita (1182–1251), we can be sure that Tibetan medicine became part of the 'five major sciences' (*rignä chéwa nga*) in monastic curricula. In any case, medical lineages in which theory and practices were transmitted from master to disciple / father to son / uncle to nephew existed centuries earlier and remain today a method of transmission of non-institutionalized medical knowledge.
6. See also Prost (2007) for an exploration of the dynamics between Tibetan medical practitioners and reforms to deal with exile politics.

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Part I

Histories of Tibetan Medical Modernities

We begin this volume with a modern historical perspective in order to show that the ethnographic complexities of encounters between disparate rational traditions of healing are far from new in the world of Tibetan medicine. We noted in the introduction, as have others before us, that the history of Tibetan medicine is itself a history of syncretism, borrowing, merging and translations across empirical and cultural geographies that probably began with the very formulation of the *Gyüshi*. In this volume, we have selected essays that convey the nuanced and layered ways in which this type of amalgamation occurred in the modern period, just as notions of 'science' themselves were becoming a defining quality of modernity. We are aware that this is only the first step in writing a modern history of Tibetan medicine across a vast geographical region, and that our authors only avail themselves of very specific sources in Russian and other European languages.

Alex McKay – working on central Tibet in the early twentieth century – documents the arrival of modern biomedical practices by way of the British, in rural outposts and in political missions across Tibetan borders. Martin Saxer, writing on the period from the late nineteenth century, documents the arrival of Tibetan medicine to the northwestern regions beyond Tibet in Russia. Both cases demonstrate the fact that debates about how to decipher efficacy in a rational and scientific manner were sometimes tied to perceptions of diagnostic and therapeutic efficacy, sometimes tied to political agendas that saw medicine as a useful tool for diplomacy and/or leverage, and sometimes tied simply to the charismatic authority of individual practitioners. At other times, efficacy was simply seen as an empirical fact: people were cured.

In Chapter Two, Alex McKay elucidates the obscure history of the arrival of biomedical interventions in the early twentieth century at the edge of British colonialism in Tibet. His research suggests a rather easy uptake among local populations that came into direct contact with the British and little worry about biomedicine as being intrusive. There was hardly any mutuality, however, in this engagement. British medical officers were not so much worried about existing medical beliefs; rather, they simply disregarded them. They did not see existing medical practices or beliefs as threatening to health or to the integrity of biomedical practices. Biomedicine seemed to fill in the gaps left unresolved by existing medical practitioners, especially in relation to venereal diseases and smallpox. This is very different from later encounters Tibetans would have with biomedicine that accompanied Chinese reforms. McKay also identifies three stages of the uptake of biomedicine, all of which foreground trends seen at later periods and in different locations. These include the curing of patients and patients' selective resort to different practitioners, both of which were accomplished by way of the political mission. The adoption of biomedicine into Tibetan cultural norms increased its appeal (not so much for political reasons but rather as an effect of observing efficacy when used to treat British soldiers and officers). The indigenization of biomedicine occured when Tibetans were trained in techniques of biomedicine, including surgery, treatment of infections and immunization. Although we have little information about how biomedical practices became absorbed in and transformed by local cultural logics, in McKay's paper, we discover the early routes by which biomedicine established itself within Tibetan medicine in subtle and important ways, which suggest less incompatibility between the traditions than is often assumed (and that are pronounced in later periods).

Chapter Three by Martin Saxer provides a rich and textured unveiling of one of the famous Badmayev family, descended from Buryat lineages and known for their skill in Tibetan medicine. Under the Russian Tsars, the Badmayevs became ambassadors for Tibetan medicine among the Russian elite. They were also interlocutors – they regionalized their medicine and accommodated local political, empirical and personal contingencies which shaped their medicine into a uniquely Russian form. In contrast to McKay, whose focus is on the absorption of biomedicine in the context of Tibet, Saxer provides us with an exemplary case of the 'worlding' of Tibetan medicine outside of Tibet. What becomes authorized as Tibetan medicine is situated, in his chapter, within larger geographic and political contexts in ways that show an interplay of practical and empirical strategies to heal patients.

Saxer's work shows that when Tibetan medicine travels, it becomes locally differentiated, sometimes emphasizing certain aspects of its practices over others, and in this case navigating new territories between religious and scientific practice in order to claim the legitimacy of 'the modern'. Shifting political agendas that change according to region (Kalmyks, Buryats and Russians) and historical period (Tsarist and Soviet Russia) condition the ways in which Tibetan medicine is practised in an attempt to claim that it is modern.

The historical encounters with 'modernity' and 'science', as described in these chapters, help us to situate more recent encounters of the past forty or so years which, though more precipitous and overwhelming, are still informed by this past. In earlier centuries, medical practitioners were keen to use the language of 'science', or at least labelled their language in those terms. At the same time, they seemed to be preoccupied with this in a way that today's practitioners are not. Badmayev seemed more easily able to claim that Tibetan medicine was 'scientific' in its own way, based on the same principles of observation, efficacy and skill that underpinned other forms of medicine of the day even if, in the end, it was treated as 'traditional', i.e. unscientific, in the political climate of the time. Still, the whole question of labelling something as 'scientific' or 'modern' seems to be more of a problem for later Tibetan practitioners as the languages of 'science' themselves become more complex and dominant in the national arenas of public health, when claims of efficacy become increasingly regulated by the state. In any case, these opening chapters show that concern over what can be called 'scientific' is not new for Tibetan medical practitioners and that the unfolding of the language of a Tibetan 'science' is always nested in larger political and social concerns and agendas of professional legitimation.

Chapter 2

Biomedicine in Tibet at the Edge of Modernity

Alex McKay

Introduction

The Tibetan medical world has never been closed to outside influences. In the classical medical text of the *Gyüshi*, for example, we may detect historical encounters with Greek, Persian, Chinese and Indian medicine.[1] Each of those traditions has contributed to the body of knowledge in that seminal text of *sowa rigpa*, 'the science of healing' in the *Gyüshi* or the *Four Tantras*. Elements which are today seen as an integral part of a 'Tibetan', or more precisely Tibetan Buddhist system, have in actuality thus undergone a process by which they were adopted, synthesized and eventually indigenized.[2] This is, of course, entirely consistent with Charles Leslie's conclusions that 'Asian medical systems are intrinsically dynamic … [and] … continually evolving' (Leslie and Young 1992a: 6) and that syncretism is a 'normative cultural practice' (Leslie 1992b: 178–9).

Over the last century the Tibetan world has again been engaged in an encounter with a body of foreign medical knowledge, known as 'biomedicine'.[3] Since the 1950s Tibetans have encountered this system primarily in the form represented by the Chinese or Indian state, but the formative years of the encounter occurred during the British colonial period in Asia. The biomedical system developed during the late nineteenth century, and its divergence from earlier humoral understandings of the body and religious understandings of disease causation radically separated it from traditional medicine. The system was fully established within the British imperial medical services, as well as missionary medicine practices, when British forces invaded Tibet in 1903–04 and forced the Tibetans to

engage politically – and to a lesser extent socially – with the Western world. While the Tibetan medical world was radically transformed by this encounter, in the historical perspective it doubtless replicates many aspects of earlier historical processes and areas of syncretism can be seen to have emerged in line with Leslie's dictum.

The British impact on Tibet was largely limited to the areas along the Indo-Tibetan trade route from Bengal to Lhasa, and the vast majority of Tibetans had little or no experience of biomedicine prior to the Chinese take-over in the 1950s. But a study of the initial stage of the encounter sheds considerable light on the processes identified by Charles Leslie and on the formative elements of the present Tibetan medical world. In what follows we will outline the process by which biomedicine was introduced into Tibet as a consequence of the British political project there, discuss the encounter between the two medical worlds, and identify initial steps towards a dialogue between them in the form of cultural concessions or practical adaptations from one world to the other.

The principle sources for this discussion are the records of the British medical project in Tibet, supplemented by interviews with relevant medical practitioners and British and Tibetan memoirs of the period. It should be noted that the British record-keeping was often poor and that their statistics can only be accepted as a general guide. But while the colonial sources naturally represent British perspectives on the encounter, they also shed light on Tibetan reactions to biomedicine and record milestones in the structural development of the new system in Tibet.[4]

Medicine for a Political Purpose

The primary agency responsible for the introduction of biomedicine into Tibet was the British Government of India, more specifically the Indian Medical Service officers who were attached to the Indian Foreign and Political Department (the 'Politicals'). This was the diplomatic corps of the British Indian government, which dealt with relations with the Princely states and neighbouring states such as Nepal and Tibet. While Christian missionaries fostered the new medical system in border areas, where they played a major role in biomedical education and training, the missionaries were excluded from Tibet by agreement between the two powers. While there were also private commercial initiatives, particularly with regard to the importation of medicines into Tibet from India, these were small scale and overtaken by the imperial project. Individual European travellers also

contributed to Tibetan faith (or otherwise!) in Western medical skill, but biomedicine was primarily fostered there as a result of the northward expansion of British power in India.

The search for a secure Himalayan frontier, allied to real or imagined fears of Russian and Chinese power to the north, led British Indian forces to invade Tibet in 1903–04. The invasion, commonly termed the 'Younghusband Mission' by the British after its leader, the Political Officer Colonel Francis Younghusband, fought its way to Lhasa, the Tibetan capital. There it forced the Tibetans to enter into diplomatic relations with India and accept the presence of British Indian diplomats at Gyantse, 120 miles south-west of Lhasa, Yatung in the Chumbi Valley and at Gartok in western Tibet. After 1936 a British mission was also established in Lhasa. Seeking ultimately to turn the Tibetans into allies – or according to some plans, subjects – the British used biomedicine as a political weapon with which to gain Tibetan goodwill, which they hoped would translate into political support.

Free medical treatment was offered to Tibetans of all classes by Younghusband's medical staff, which after a slow start attracted increasing numbers of patients, particularly after the mission reached Lhasa. Following the mission's withdrawal, biomedical dispensaries were established alongside the diplomatic posts. A British officer of the Indian Medical Service (IMS) was stationed at the Gyantse Dispensary, while less qualified sub-assistant surgeons of Indian and later Sikkimese origin were posted to Yatung and to Gartok (which was not staffed by the political department and was of only minor significance). After the establishment of a British mission at Lhasa in 1936–37, a hospital was also opened there and in 1940 an IMS officer was appointed to a new position of Civil Surgeon for Tibet and Bhutan, which was in effect that of the Lhasa mission medical officer.[5]

British medical officers were posted to Tibet for two-year terms and while their primary duty was to ensure the health of the Political Agent, the provision of medical services to the local population was of great significance. These medical officers generally submitted annual reports, which enable us to measure the growth of biomedical resort. For the calendar year 1906, Gyantse Dispensary had thirty-four in-patients and saw 369 out-patients (of whom thirty-one were Chinese). Four decades later, in the year ending on 31 March 1946, there were still only thirty in-patients, but there were a total of 5,544 out-patients. In Yatung, the first year for which figures are available is 1922, when there were 150 out-patients and no in-patients. In the year ending March 1947 the report accounts for sixteen in-patients and 3,631 out-patients. There was,

therefore, a significant change in resort patterns, with Tibetans increasingly attending the IMS dispensaries as out-patients, although they remained reluctant to become in-patients.[6]

The political purpose of the British medical project was clearly articulated throughout the years until 1947 (after which the British positions were inherited by independent India). In recommending the establishment of the Gyantse Dispensary, Younghusband had described it as 'extremely desirable on political grounds',[7] and in the 1940s the work of medical officers continued to be described as 'of great political value'.[8] The primacy of their diplomatic role was also indicated by several periods in which, in the absence of a Political Officer, the IMS physicians acted in that role. While this could create certain tensions and ethical dilemmas, the doctors were always aware of their primary duty – 'a responsibility to our [political] mission' (Morgan 2007: 131).

Imperial and Biomedical Confidence

To fully understand the context in which biomedicine was introduced into Tibet, we must consider the wider imperial situation. During the Viceroyalty of Lord Curzon (1899–1905), British power and prestige in India reached its peak. In retrospect the seeds of its decline were already clear; the rise of Indian nationalism, British defeats in the Boer war and subsequent growing anti-imperialism among British voters were all pronounced by that time. The Younghusband Mission of 1903–04 actually marked a 'high tide' in British imperial expansion in South Asia. After that time, the empire advanced no further, and the subsequent period was one of consolidation and retreat. But in India under Curzon, the prevailing British mood was one of great confidence in the imperial project.

British medical officers were not only imbued with the confidence of their empire, they were also full of a new confidence in their profession. Scientific and technological advances, together with the discovery of the principle of disease causation agents ('germs'), had revolutionized the practice of medicine in the West during the last quarter of the nineteenth century. Aseptic surgery was a radical advance in intrusive practice, while a series of discoveries of specific causation agents seemed to suggest that the prospect of conquering most common diseases was at hand. Medicine was at the forefront of the new scientific advances and professional organization and status had greatly increased in the wake of these developments.

The IMS and its provincial predecessor services were well aware from their experiences in other regions of South Asia that the reception of their

medical services was by no means socially unproblematic. Yet their imperial and professional confidence seems to have dictated that the form of biomedicine they offered made no concessions to local culture other than those dictated by logistics and environment. In such areas as internal architecture, dress, hospital hours and routine, teaching patterns, visitor access and determined secularism, the early IMS dispensaries in Tibet emulated the model of hospitals in the U.K.

Imperial confidence and the biomedical assumption that other medical practices would simply fade away in the face of the new system's power and efficacy may explain why we turn in vain to the British records when seeking studies or even comments on Tibetan medical theory and practice. It appears that none of the nearly thirty British medical officers who served in Tibet during the 1904–47 period ever undertook any serious study of the indigenous traditions. Even in the 1940s when confidence in both empire and the potential of biomedicine had greatly declined from the Curzonian era, there were only brief and dismissive comments on those practices in private correspondence or diaries.[9]

Dr R.S. Kennedy, medical officer in Gyantse in 1907–10, and one of only a handful of IMS officers who learned Tibetan, did visit the Mentsikhang, the hospital for Tibetan medicine and astrology, while in Lhasa in 1920–21, accompanied by the Political Officer Charles Bell. But such encounters with the local system and its practitioners were the exception rather than the rule. Younghusband's chief medical officer, Dr L.A. Waddell, had met the head of the Chakpori medical college in Lhasa, but dismissed his explanations of the underlying philosophy of the Tibetan medical system as 'saturated with absurdity',[10] while Dr M.V. Kurian, an Indian Christian IMS officer who served in Tibet in the 1940s, did not recall ever specifically meeting a local practitioner.[11] Dr W.S. Morgan, a highly regarded IMS officer who served in Tibet in 1936–37, displayed some interest in, and even sympathy for, local practitioners, but he ultimately accepted the conclusions of his principal informant, Sikkimese sub-assistant surgeon Bo Tsering, trained in biomedicine and highly critical of the local system and its practitioners (Morgan 2007: 109–13, 118–19).

Adapting Biomedicine for Tibetans

While the IMS officers were not concerned with the local system, they did seek to attract Tibetan patients and in that sense were in competition with indigenous physicians. They undoubtedly had humanitarian motives which we must consider. They were confronted by suffering, wanted to alleviate it,

and in many cases knew they could do so given the opportunity. But there was also the British political project of which they were a part, and any Tibetan reluctance to attend the IMS dispensaries was seen as reflecting poorly on British prestige and threatening the success of the diplomatic endeavour.

The result was that increasing efforts were made to attract Tibetans to biomedicine. These emerge clearly in the highly politicized context of the 1930s and 1940s, although there may have been earlier concessions to Tibetan culture that are not recorded. Sino-British competition for Tibetan support re-emerged strongly after the death of the Thirteenth Dalai Lama in 1933. Tibet had been effectively independent under his rule since 1913 and Chinese officials had been largely excluded from Tibet in that period. But after 1934, following the arrival in Lhasa of a Republican Chinese 'condolence mission', the British took on a more active role to counter their growing influence. The building of a new hospital in Lhasa and the establishment of the post of Civil Surgeon Tibet and Bhutan were manifestations of this active policy in the medical field.

This political context was most clearly explicit when the Chinese opened a biomedical hospital in Lhasa in 1944 which attracted many patients who had previously attended the British hospital. There seems to have been no particular difference between treatment at the two institutions because at that time China was following the Western biomedical public health care model; the dispute was over status and influence at Lhasa. While the Chinese hospital remained in existence the Political Officer in charge of the British positions in Tibet emphasized that 'Chinese competition in medical work calls for a high standard from us'.[12] To counter the Chinese, the Gyantse medical officer Dr Kurian was sent to Lhasa to assist the new Civil Surgeon, Dr G.S. Terry, a civilian war-time appointee who was soon replaced by the Tibetan-speaking Lieutenant-Colonel James Guthrie.

A number of specific measures designed to enhance the Tibetan uptake of biomedicine were taken by successive IMS physicians during this period. No evidence of any formal discussion about this has survived, and the measures were probably experimental initiatives by individual IMS officers, doubtless taking into account the opinions of the long-serving Sikkimese sub-assistant surgeons, Bo Tsering and Tonyot Tsering (for more on whom, see below). While there seem to be no examples of local medical curing strategies being incorporated into biomedicine at this time, no use of local herbs etc., concessions were made in regard to structures and biomedical routines. One concession to Tibetan culture was to allow elective surgery to be undertaken on a day chosen by the patient in consultation with a religious

advisor, thus recognizing the Tibetan belief in auspicious days for individuals. That practice survives today in parts of the Buddhist Himalayas, such as Bhutan, and has been extended to the permanent posting of religious practitioners within the hospital wards as staff members.

Measures were also taken to alter the hospital environment to suit Tibetan traditions. Isolation was not a Tibetan practice (except in cases of smallpox) and the confining of sick individuals was similarly foreign. Tibetans found Western hospitals forbidding, sites of impurity that seemed 'like a vision of hell'.[13] To counter this impression, the British allowed patients' relatives to camp in the hospital grounds and permitted greatly increased visitor access in order to reduce patients' sense of isolation. They also turned a blind eye to dual resort; for example, Dr Guthrie allowed the Tsarong family to administer powdered rhinoceros horn to a birthing mother on the principle of 'allowing anything that would increase confidence provided it would not be harmful'.[14]

What these measures had in common, from the British perspective, was that they did not threaten what the IMS officers thus defined as an essential core of biomedical theory and practice. They were concessions in form and presentation, not least in allowing a religious dimension to a practice seen by the British as entirely secular. Increased efforts were also made to explain biomedical practices, and the wives of the Civil Surgeons were permitted to accompany them to Lhasa, where they were able to explain biomedical principles to Tibetan women. Mrs Guthrie, a nurse, was also able to assist her husband's practice. The increased Tibetan resort to the dispensaries during this period suggests that these concessions did help to attract patients to biomedicine, which now took on external elements that were recognisably within Tibetan culture. The survival of these elements into the post-colonial period suggests they may represent permanent elements of the indigenization of biomedicine in this cultural region.

Tibetan Adoption of Biomedicine

In addition to biomedical concessions to Tibetan culture, we may also trace aspects of that system that were gradually absorbed into indigenous medical understandings and practices. Despite the enormous conceptual differences between the two systems, they shared a recognition of the importance of the consulting physician registering the patient's pulse. Stethoscopes – the display of which became an obvious symbol of the biomedical practitioner – were soon adopted by some Tibetan practitioners,

partly we may suggest, because of their symbolic association with modernity. In addition, another strongly visual symbol of biomedicine became common in the Tibetan world; the 1940s Italian traveller Fosco Maraini speaks of the 'blind faith' of Tibetans in injections which were apparently extremely popular by that time, and often given by unskilled practitioners.[15] This visual appeal has been noted as being favourable to biomedicine in contemporary Bhutan, with patients preferring that system over indigenous traditions because X-rays, CAT scans, etc. can be seen and understood by the patient, who therefore feels empowered.[16]

The pharmacology of biomedicine was also used by Tibetans outside the institutional settings of biomedicine, with antibiotics particularly in demand in the 1940s. These were often sold in ordinary shops, priced and prescribed by colour [!] and kept and used in large quantities by ordinary families.[17] Practitioners of *sowa rigpa* also made use of the new medicines. In Lhasa in the 1930s, if not earlier, *amchi* (lay Tibetan medical practitioners) would visit Bo Tsering, describe their patients' symptoms, and he would provide stocks from the British dispensary for them to distribute to their patients (Morgan 2007: 111–13). What Leslie termed the 'dynamic' aspects of local practice were thus clearly visible by this period, as was an increasingly empowered patient base.

But the introduction of Western technologies was not necessarily greeted with approval in Tibetan society. There were traditional avenues for the establishment of foreign technologies: Bhutan, for example, was referred to in early Tibetan sources as Lhojong Menjong ('Southern Valleys of Medicinal Herbs'), but machinery could be considered fanciful, 'false knowledge' in the Buddhist sense (Aris 1994: 8). As early as 1724, Capuchin missionaries practicing medicine in Lhasa presented the then Seventh Dalai Lama with a microscope (Vannini 1976: 221), and they were commonly shown to Tibetans during the British period, without this apparently creating any demand for them.

It is assumed that the establishment of the Mentsikhang hospital in Lhasa was a Tibetan initiative that drew on the model of the Western public health system. *Amchi* do not seem to have formed institutions outside family lineages, and the concept of an in-patient hospital seems to have been previously unknown, with patients normally treated in their own homes. The traditional Tibetan model of the medical institution was the monastic college, of which the most prominent was Chakpori in Lhasa. Its physicians primarily catered to elite patrons and public access to these colleges appears to have been limited. In the case of Chakpori, for example, eight of its

physicians were available to the public on afternoons during the annual Great Prayer celebrations (Mönlam Chenmo) (Meyer 1988: 114), and not apparently during the rest of the year.

Around 1916–17, however, the Mentsikhang hospital was opened in Lhasa under the Chakpori-trained traditional physician Khyenrab Norbu (1883–1962). It apparently offered free *sowa rigpa* medical treatment to the general public and secondary sources indicate that it was established after the Thirteenth Dalai Lama had been made aware of the British Indian public health system during his Indian exile in 1910–12. Certainly it followed the dispensary model of health care, which David Arnold called 'one of Western medicine's most distinctive and effective institutional forms' (Arnold 2000: 178). But its history has not been subject to academic enquiry,[18] and there is no record that the British had any involvement in its conception. While the Political Officer Charles Bell (who was responsible for the Dalai Lama during his Indian exile) did advise his guest on numerous aspects of Western modernity and government, Bell makes no mention of this initiative in his writings,[19] and the Dalai Lama was open to other influences.

From the Tibetan perspective, a free public health system was clearly in line with Buddhist ideals of compassion. And in 1904–09 the Tibetan ruler had also been exiled in Mongolia, where the Russians maintained a small biomedical dispensary in Urga, and China, where he may have been made aware of biomedical hospitals that existed there. Further research in this area is necessary. We would hope that more research would shed light on the choice of *sowa rigpa* over biomedicine as the prevailing system at the Mentsikhang. We simply do not know whether this stemmed from a logical development of the existing structures, a nationalist statement, or a choice dictated by financial considerations (for the Tibetan state lacked the financial capital necessary for the development of many aspects of modernity, including biomedicine). Nonetheless, its location in the Tibetan capital was consistent with the Thirteenth Dalai Lama's policies of centralized control, and we may suspect that the Dalai Lama primarily intended a system showcasing *sowa rigpa* because the introduction of smallpox vaccination at the state level in the 1920s (see below) was the only state-sponsored biomedical initiative under his rule.

The only other such initiative in pre-communist Tibet came in 1942, when the Tibetan government funded the construction of a two-room hospital block alongside the British hospital. This was intended for the use of Tibetan officials receiving biomedical treatment and consisted of two

rooms, each for two in-patients, with an attached kitchen and store-room.[20] Its construction was a symbol of the growing use of biomedicine by the Tibetan elites, with both of the regents who ruled Tibet between the Thirteenth and Fourteenth Dalai Lamas receiving biomedical treatment from the IMS physicians.

Here we might note that following the practice in India, where Agency surgeons were charged with attendance on the ruling families of Princely states, the British dispensaries in Tibet always offered private consultations to certain members of the political elites. It is unclear which individuals and families were allocated this privilege; presumably they were chosen by the Political Officer. But scattered references to those attending the dispensary and the memoirs of Tibetans now in exile suggests that the privilege was given more to the secular political elites rather than the monastic, which is consistent with general British efforts that, until the 1940s, neglected the monastic powers. Thus, while powerful lay officials such as Tsarong Zhapé and his family were entitled to private consultations, we read of the highly respected Sakya *lama* attending the British dispensary to be vaccinated against smallpox and his family complaining of having to queue with the general public for treatment there.[21]

Nonetheless, while the British system excluded powerful monastic elements from the ranks of the privileged, the lay authorities entitled to private consultations must have understood the biomedical system as one which would allow them to retain their status and privileges. The support of the lay authorities thus became an important pillar in the development of biomedicine and the fact that the system did not threaten existing secular social hierarchies must have enhanced its appeal to that class.

Syncretism as Process

While biomedicine was promoted within the imperial project in Tibet, just as it was promoted within a Christian agenda by missionaries in the border areas, this does not imply that it was thus received by the indigenous peoples. There was a certain paradox inherent in the promotion of biomedicine in these contexts. While it was explicitly used as a political (or missionary) weapon, it was also part of a package of modernity that the imperial powers sought to introduce into local society. Biomedicine was thus to be transmitted to that society through general explanation and education, the training of local practitioners, and the establishment of local structures. It was a power that was to be given away to the locals (not least because of economic constraints

on the Western agents), a point that challenges an understanding of imperial medicine as a 'tool of empire' (Headrick 1981). The reality was more complex and multi-layered, with the encounter primarily negotiated at a local level.

Once it became clear to the indigenous people that acceptance of biomedicine did not involve conversion to Christianity in the case of missionary medicine, or any specific commitment to supporting British interests in the case of IMS medicine, and it was understood that it could be controlled by, and did not threaten, certain existing social hierarchies, many of the barriers to its adoption disappeared. We can identify three stages in a process of Tibetan uptake of biomedicine. The first was the adoption of resort to biomedicine as a curing strategy for certain specific conditions (see below). The second was the adaptation of aspects of the biomedical system to Tibetan cultural norms in order to increase its appeal. The third stage was the indigenization of biomedicine, in which control over structures and processes passed to local hands, reliance on foreign supplies was diminished by the establishment of a local drug industry, and local individuals took up the practice of biomedicine.

The first stage of this process occurred during the British colonial period. While biomedicine was only available to Tibetans in central Tibet, and in bordering regions where missionary medicine could be obtained, the attendance statistics at the IMS dispensaries indicate that it became a common resort strategy during this period. The second stage of the process was underway by the time the British left Tibet, and continued both in the Tibetan regions of China and in the exile community. However, the third stage of the process only occurred in the post-colonial period.

The process can be seen more clearly in its entirety in Sikkim, where biomedicine was introduced in the late 1890s and where Sikkimese biomedical practitioners had graduated at sub-assistant surgeon level before the First World War, and at full MD status by the Second World War. Biomedicine in Sikkim today is entirely indigenized, with Sikkimese/Indian control over the public health system, including structures and training, a local drug industry and Sikkimese personnel at all levels of the process, with Western practitioners entirely absent. There are of course global system interventions and funding with regard to conditions such as SARS and HIV/AIDS, and dual resort involving the continuation of traditional practices, but these aspects are characteristic of medical systems all over the world.

The Sikkimese experience was of considerable importance to the indigenization process in Tibet. Bo Tsering and Tonyot Tsering (who were not closely related), two of the first three Sikkimese to qualify as sub-

assistant surgeons, were promptly posted to the IMS dispensaries in Tibet. Within the wider context of encouraging the gradual modernization of Tibet, the Political Officer Charles Bell hoped that the sight of the culturally closely related Sikkimese practising biomedicine would encourage Tibetans to take up biomedicine as a profession. While largely unsuccessful in that regard, the initiative was of considerable success in promoting the uptake of biomedicine. The two Tserings remained in Tibet for around thirty years and the British found that 'in fields social, medical and political— [they] could inspire more trust, more confidence, and foster more friendships than perhaps any of us' (Morgan 2007: 22).

With the exception of Khyenrab Norbu, there are few records of Tibetans displaying particular interest in biomedicine. We read of a monk who asked the Gyantse medical officer to teach him surgery in the 1920s, while the Tibetan Trade Agent in Gyantse assisted the British medical officer on a vaccination tour north of Gyantse in 1935, having 'always shown a lively interest in Western medicine'.[22] In addition, at least one Tibetan, a young monk, received some medical training from the British, spending three years at the Lhasa dispensary from 1937 to 1940, while several others were employed as 'dressers', a British colonial term for a basic health care provider or assistant. But IMS officers were only briefly present during this period to supervise training, and the monk left to find employment at the Mentsikhang. There he stitched wounds and, in another example of broadening *sowa rigpa*, he provided basic treatment with Western drugs.[23]

Patterns of Resort

The defining characteristic of the Tibetan uptake of biomedicine was selective resort. Biomedicine was not adopted wholesale, but its treatment of four particular conditions quickly emerged as favoured curing strategies among the Tibetan peoples. Vaccination against smallpox, treatment for wounds and fractures, eye surgery, and biomedical curing of venereal diseases formed this quartet of treatments that rapidly gained favour with Tibetan patients. Each of these treatments became embedded within Tibetan patterns of resort through particular historical trajectories which had, however, certain commonalities, as will be seen.

Biomedical treatment for most of the major epidemic diseases that had historically affected the Asian and European landmass derived from the late nineteenth-century discovery of biological disease causation agents. However, vaccination against smallpox was an exception. It was a

development of the practice of variolation,[24] widely known and practiced in pre-modern Asia and introduced to the West from Turkey in the early years of the eighteenth century. Despite various problems, such as difficulties with maintaining the efficacy of lymph prepared for vaccination during storage and transportation, the improved system was strongly promoted by the imperial health services both in British India and in China, as well as by Russia in Central Asia.

Early Tibetan travellers to imperial centres such as Bengal and Peking may well have become aware of the benefits of vaccination, and we know that the East India Company surgeon Alexander Hamilton explained the principles of the new system to the Third Panchen Lama in 1774–75 (Lamb 2002: 198–99, 268). A century later, in 1879, the Fifth Panchen Lama's Chief Minister, Sengchen Lama (Lobzang Palden Chöphel), asked the visiting British Indian agent Sarat Chandra Das to bring smallpox vaccine to Tibet on his next visit. Chandra Das did return with lymph in 1881–82, but it had spoiled on the journey, and vaccination in central Tibet only commenced with the Younghusband Mission in 1903–1904 (cf., McKay 2006/07: 119–30). There had, however, been an earlier, small-scale instance of vaccination within Tibet in 1867, when the Moravian missionary Eduard Pagell was invited to western Tibet to combat an outbreak of smallpox. Pagell vaccinated 639 people in twelve villages at a time when Europeans were generally unwelcome in Tibet (Bray 1992: 371; also see Bray 1985: 28–31, 36–37). His visit was apparently an initiative by local officials, the class who were later to play an important role in facilitating biomedical initiatives by the British.

The trade routes from Tibet to India offered an entry point for smallpox and after the British had established permanent diplomatic outposts in Tibet as a result of the Younghusband Mission, systematic efforts were made to introduce vaccination in Tibet. There was a strong economic imperative behind these efforts. The Himalayan epidemic of 1900 threatened British India, and cross-border trade was halted until the epidemic was controlled. The medical officers stationed at the British diplomatic outposts in Gyantse, Yatung and Gartok thus promoted vaccination from the outset, with 1,320 local children vaccinated at Gyantse by the end of 1905.[25] This programme was carried out with the approval of the local district administrator (*dzongpön*), and elite acceptance of vaccination was further confirmed in November 1905, when the Panchen Lama and several hundred members of his court travelled to India. The entire party, including the Panchen, underwent vaccination before departure from Shigatse.

While there is evidence suggesting that Tibetans were reluctant to be vaccinated, particularly where smallpox was not present, British Indian vaccinators were again invited by local authorities, including the 'head *lama*' of Purang (Taklakot), to combat an outbreak of smallpox in western Tibet in 1907. The Manchu Dynasty Chinese officials in Lhasa, the Ambans, also supported vaccination. In 1908 they ordered all Tibetans to be vaccinated, and brought vaccinators to Tibet from China (although it is unclear if they actually carried out any vaccinations).[26]

By 1911 the majority of inhabitants of the Chumbi Valley had been vaccinated, as had large numbers of people in Gyantse.[27] As smallpox continued to break out in places such as Lhasa where vaccination had not been introduced, the efficacy of the new preventative became clearly apparent. Vaccination was provided without cost by the British, but a popular demand for it is indicated by a 1914 report that Nepalese vaccinators, who charged a small fee, found it profitable enough to travel through southern Tibet.[28]

The Tibetan state's acceptance of vaccination soon followed. In 1920–21, during his meetings with Khyenrab Norbu at the Mentsikhang, Dr Kennedy instructed the *sowa rigpa* physician in the collection and preparation of smallpox lymph.[29] The following year the Tibetan army garrison at Gyantse was systematically vaccinated,[30] the first entirely biomedical state initiative in Tibet. Although relations between Tibet and British India were deteriorating at this time, and the Tibetan state was rejecting most aspects of modernity, the Tibetan authorities continued to favour vaccination and, with British assistance, subsequently distributed lymph to outlying areas of the Tibetan state.

A number of factors may be considered to explain the Tibetans' ready acceptance of vaccination. Firstly, the general principle of introducing a preventative into the body was familiar from the existing practice of variolation, so the biomedical treatment might be accepted as a development of an existing practice rather than an entirely new strategy. Secondly, vaccination had been established earlier in neighbouring states, including culturally close regions such as Sikkim, which acted as a bridgehead for its acceptance into Tibet. Its efficacy had already been established there, and was soon empirically observable within Tibet, as vaccinated areas such as Chumbi and Gyantse remained free of the epidemics that devastated other regions. The early acceptance of vaccination by elite individuals such as the Panchen Lamas and later Khyenrab Norbu was also significant. Their traditional and institutional

authority legitimized vaccination in Tibetan society, and local officials such as the Gyantse *dzongpön*, who saw its advantages, subsequently promoted it among their people. We must also consider the role of intermediaries such as the Nepal-born Darjeeling Buddhist, Karma Paul, interpreter to the early British physicians in Gyantse. Paul records that prior to his visit to India the Panchen Lama had been afraid of the injection but Paul explained the system, showed his own vaccination scar and even allowed himself to be vaccinated again in front of the Lama, who then accepted it (Richardus 1998: 87–88).

Resort to biomedical treatment for wounds and fractures was also rapidly established in areas of Tibet where it was available. Tibetans were probably made aware of its efficacy by Younghusband's medical staff during the 1903–1904 invasion of Tibet. Aware of the need to ultimately cultivate the friendship of the Tibetans in order to ensure the security of British India's northern frontier, Younghusband's medical team treated Tibetan soldiers wounded in the fighting against his forces. While there were bone-setters in Tibet and there were various treatments for wounds that involved covering the affected area and applying herbal treatments to it, deformity and restricted use were apparently considered almost inevitable following fractures and infection of wounds must have been more common in the absence of aseptic treatment. As a result, the biomedical treatment proved popular, and throughout the British period Tibetans of all classes resorted to the IMS physicians for treatment of dog-bites, stab wounds, fractures and the like. Superior efficacy was thus a major factor in the Tibetan resort to biomedical practitioners, but as in the case of smallpox, Tibetans seemed most likely to resort to treatments where they were familiar with the general contours of the new practices, which were probably seen as improvements, rather than as innovations.

The Tibetan acceptance of eye surgery, principally the treatment of cataracts, was also prompt. These operations were first offered in Tibet by Younghusband's medical staff and subsequently by the IMS officers at Gyantse, who were well aware of the propaganda value to biomedicine of the restoration of sight.[31] Again, however, there are indications that cataract operations were not unknown to the Tibetans. Alexander Hamilton had commented on the superiority of Bhutanese surgical instruments over those he possessed for this practice (Lamb 2002: 268). But by the British period Tibetan physicians do not seem to have been carrying out these operations. While a more detailed study is necessary,[32] it appears that there were several methods of treating cataracts practiced in Asia, and skilled practitioners of

any one technique may always have been rare. But the knowledge that the operation was possible again suggests that Tibetan familiarity with the general concept aided its acceptance, with the understanding that the biomedical physicians offered an improved rather than a novel treatment.

Biomedical treatment for venereal diseases was the fourth therapy that was most rapidly accepted by the Tibetans. In this case an understanding of the superior efficacy of the new treatment appears to have developed during the period 1905–11, when Manchu Dynasty troops were garrisoned alongside Tibetan forces in Gyantse. The Chinese troops, already familiar with the new treatments then emerging as a result of their use in China, regularly attended the IMS dispensary there for venereal infections and it seems certain that, with Chinese women excluded from Tibet, soldiers from both nations patronized the same reservoirs of infection. Again, the general contours of the treatment – the application of a specific (mercury-based?) preparation – seems to have been common to both traditional and biomedical curing, facilitating the Tibetan uptake of the new treatment, which came to be heavily favoured when it proved more efficacious.[33]

The evidence suggests, therefore, that those aspects of the biomedical system that were first accepted by Tibetans were those in which the general pattern of treatment was similar to that of the indigenous treatment, but empirically indicated as being significantly more efficacious. In addition, the acceptance of a biomedical treatment by neighbouring Asian cultures would appear to have enhanced its uptake in Tibet. While the simple fact of the availability of physicians and their offering of free treatment (as the IMS officers in Tibet did) doubtless explains many cases of resort to biomedicine, other treatments were only accepted over time within the gradual process of indigenization of biomedicine and were thus dependent on the development of new understandings, biomedical cultural concessions, etc.

The growth of a small class of Western-educated Tibetans and their association with at least some aspects of modernity was also an important factor at least in central Tibet, while novelty and indeed a questioning of the prevailing socio-cultural system must also be considered as factors. Nationalist based resistance to biomedicine of the kind identified in India by scholars such as David Arnold and Ian Catanach seems largely absent from Tibet (cf., Arnold 1987: 55–90, Catanach 1988: 149–71), where nationalism in the modern sense of identification with a nation-state was poorly developed in the colonial period.

While the defining attribute of the Tibetan uptake of biomedicine was selective resort, it must be remembered that dual resort was – and still is –

also characteristic. This took various forms: experimenting first with one and then another treatment, selective resort to one system for particular conditions and simultaneous treatment under two systems for the same condition. In the latter case this could be with the understanding that biomedicine was effective in the physical world, and indigenous treatment effective in the other world.[34] This pattern of resort, which was not promoted by any particular system or power structure, and which is difficult if not impossible to measure, suggests that patients based their pragmatic selection on what they perceived as the most efficacious curing strategy available to them rather than on the influence of any particular power complex.

A Common Ground?

The initial encounter between Tibetan and Western medical worlds could be seen as a meeting of two mutually incomprehensible traditions. Their conceptual bases were fundamentally incompatible. In the Tibetan system, for example, religion and medicine were two sides of the same coin, with the teachings of the *Gyüshi* understood as deriving from the teachings of the Buddha in his Medicine Buddha aspect. In stark contrast, biomedicine was determinedly secular. Dialogue between the two systems was certainly almost entirely absent. Waddell, as we have noted, concluded that the Tibetan system was 'saturated with absurdity', and that underlying belief was never seriously questioned by the IMS officers or their biomedical assistants during the colonial period. Only in the case of Dr Kennedy and Khyenrab Norbu in 1920–21 does there appear to have been any real attempt to exchange information, albeit apparently a one-sided exchange.

Yet we may identify the existence of a dimension in which the two systems were in communication – the social and ethical construct of the doctor/healer in society. In both traditions the practice of the doctor/healer was seen as morally good work for the benefit of humanity. This was particularly the case when medical services were offered without financial benefit, but even professional medical services were seen in this light. Physicians held high social status partly as a result of the moral aspect of their work, and the ideal of their calling was that it was ultimately beyond material reward: the doctor was regarded as duty bound to assist those in urgent need.

Christopher Beckwith has pointed out the similarities between the Hippocratic oath and a very similar – perhaps derivative – medical oath contained in an eighth-century Tibetan medical text which emerges in similar form in later texts such as the *Gyüshi*. It calls for physicians to be

honoured with status, horses and gold, while counselling them: 'Do not expound [medicine, to them] for the sake of [their] poor offerings; [as you are] pursuing learned piety, do not do evil to householders; [as you are] upholding the noble method, do not give out evil drugs … do not be indecent and hypocritical to patients' (Beckwith 1979: 304). This cross-cultural commonality may have assisted the development of Tibetans' understanding of the IMS physicians and ultimately the system they practiced. The Tibetans had no experience of physicians as agents of the state, but do appear to have favourably distinguished the British physicians from their fellow-countrymen. For example, Waddell quotes the Tibetan Regent (the abbot of Ganden monastery) as stating that 'except you doctors, of whose humane work I have heard;… all the others are utterly devoid of religion' (L.A. Waddell, quoted in Allen 2004: 289). While there is no evidence that this was recognized by the British, the shared ideal of the doctor/healer may thus have assisted in the reception of biomedicine in Tibet.

Conclusions

The indigenization of biomedicine in Tibetan societies was a process which took several generations. While it began during the colonial period, only a preliminary phase was completed when the British withdrew from Tibet at the end of the 1940s. It may well be, however, that studies of the earlier indigenization of foreign systems such as Greek and Indian medicine will indicate that these were also processes rather than events.

While biomedicine was introduced to Tibet at a time of great confidence in both British Empire and the new medical system, syncretism in the form of concessions to local culture proved necessary in order to attract Tibetans on a large scale. Most notably, the essentially secular claims to biomedical authority had to be mediated through Tibetan religious world-views. While a deep intellectual engagement was lacking in the colonial period, practical concessions acknowledged Tibetan cultural understandings, and paved the way for later explicit concessions to Tibetan beliefs. Even then, the Tibetan uptake of biomedicine was selective, with continuing dual resort, and increased resort to biomedicine was slow and gradual. Nonetheless, the eventual post-colonial result was the creation of Tibetan biomedical structures (within Indian or Chinese state parameters).

Biomedicine was introduced to Tibet by the British for a political purpose. Whether it served that purpose is an open question, given the

subsequent collapse of the British colonial project. But the Tibetan reception of biomedicine was a complex and multi-layered process, much of which took place outside state structures and was negotiated at a local level. The example of elite individuals such as the Panchen Lama and the acceptance of the new system by local officials were important in the move towards biomedical structural initiatives, but patient-driven demand was also a factor in its spread, particularly in regard to those elements of biomedicine that were most rapidly resorted to by Tibetans. Many examples of moves towards syncretism occurred outside formal structures, with empirical observation of biomedical efficacy being an often underrated factor in the uptake of aspects of the new system. A shared ethical basis in the understanding of medical practice formed an area from which syncretism could develop in the form of blurred boundaries of theory and practice.

Finally we should emphasize that the history of biomedical development in Tibet was not a unique event. A growing number of studies of biomedical beginnings throughout the world indicate that many of the characteristic features of the introduction of biomedicine to Tibet are common to other regions.[35] A gradual uptake featuring selective and dual resort, and a slow process of indigenization seem characteristic of the process regardless of location.

Notes

1. On the origins of the *Gyüshi*, see Emmerick 1977, Karmay 1998, Beckwith 1979.
2. I use the term 'indigenized' to indicate understandings and practices that have undergone a process of absorption into an indigenous culture, and a system in which the structures and personnel are entirely under indigenous control (as much as is possible under a world system). Among the characteristics of indigenized practices and systems are that they are taught and expressed in local languages where appropriate, are understood within a wider cultural world-view, possess a local history, and are transmitted within local teaching lineages or forms of instruction.
3. Biomedicine is a system developed largely in the West in the late nineteenth century and known under various names including 'allopathic', 'cosmopolitan', 'scientific' or 'Western' medicine.
4. Research was carried out during a Wellcome Trust Centre for the History of Medicine research fellowship. My thanks are due to the Centre staff and its Director, Professor Hal Cook, for their support. I am also grateful to Mona Schrempf for her encouragement with regard to this and related works. Where not otherwise cited, this work draws on my monograph (McKay 2007).
5. For a complete list of British political/diplomatic, medical and military officers who served in Tibet during the period 1904–47, see McKay (1997: 228–37).

6. The annual reports from the British dispensaries are generally attached to the reports of the Political Agency in the Oriental and India Office Collection (hereafter OIOC) L/P&S/11 and L/P&S/12 series. The first Gyantse report covering the period 1904–06 appears to survive only within the [Lt-Colonel F.M.] Bailey collection; MSS Eur F157–304b. The attendance records are collated as an appendix in McKay 2007.
7. National Archives of India Foreign Department [hereafter, NAI FD,] 1906 External B, March 19–31, file note by Colonel Younghusband, 4 November 1904.
8. OIOC, L/P&S/12/4201–5747, Lhasa mission report, week ending 5 September 1943.
9. Whether Tibetans left any accounts of biomedicine is a question that awaits a study of the indigenous sources.
10. L.A. Waddell, quoted in Allen (2004: 288) [no source given; presumably Waddell, *Lhasa and its Mysteries*, London, 1905].
11. Author interview with Dr M.V. Kurian, IMS, Coimbatore, 12 January 1994.
12. OIOC, L/P&S/12/4206–4830, Political Officer Sikkim to Government of India Foreign Department, 15 September 1944. As for Guthrie see McKay (2005: 128–35).
13. See for example, the comments by Jamyang Sakya in Sakya and Emery (1990: 188).
14. Mrs R. Guthrie, 'Everyday Life in Yesterday's Tibet', unpublished manuscript in the possession of Mr David Guthrie.
15. Maraini (1998: 241); interview with Dr Jigmé and Dr Mrs Harku Norbu, retired Jigmé Dorji Wangchuk Hospital Superintendents, Thimphu, 21 July 2004.
16. Interview with Dr Tobgye Wangchuk, Acting Superintendent, JDW Hospital, Thimphu, 23 July 2004.
17. Interview with Dr Jigmé and Dr Mrs Harku Norbu, 2004.
18. The topic is now subject to enquiry by Stacey van Vleet (Columbia University). See her paper 'Curriculum, Pedagogy, and Modernity in the Sman rtsis khang' presented at the International Association for the Study of Traditional Asian Medicine (IASTAM) VIIth conference, Thimphu, Bhutan, September 2009.
19. In particular, it is not mentioned in Bell's *Portrait of a Dalai Lama* (1987), where he discusses his advice to the Tibetan leader in exile. I have not seen any mention of the Mentsikhang establishment in British records; no Europeans visited Lhasa in the years between 1904 and 1920.
20. OIOC, L/P&S/12/4206–5223, report on the civil hospital, Lhasa, 1945–46.
21. OIOC, L/P&S/12/4166–2080, Gyantse annual report 1926; Sakya and Emery (1990: 251), also see ibid: 242.
22. OIOC, MSS Eur D989, papers of Frank Ludlow, [Gyantse school headmaster 1923–26 and later Head of British Mission Lhasa], diary entry 20 March 1925; L/P&S/12/4166–4567, Gyantse annual report 1935–36.
23. W.S. Morgan, '1936–37 Lhasa mission medical report'; appendix in Bradfield 1938: 641–43; OIOC, L/P&S/12/4206–5223, Report on the civil hospital Lhasa, 1945–46.

24. 'Vaccination' refers to inoculation with animal poxes containing the vaccina virus, whereas 'variolation' involves the introduction to the human body of matter containing the variola virus.
25. OIOC, MSS Eur F157–304b, Gyantse dispensary report, year ending 31 December 1905.
26. OIOC L/P&S/7/220–1625, Gyantse annual report 1907–08, NAI, FD, External B, June 1911, 289, file note by 'T.W.' 6 June 1911; NAI, FD, Secret E, February 1908, 467–482, file note by E.H.S. Clarke, 26 November 1907; NAI FD, External B, October 1908, 194–216, Gyantse agency diary entry, 10 September 1908.
27. OIOC, L/P&S/7/249–1151, Gyantse annual report, 1910–11.
28. OIOC, L/P&S/10/218–2396, Gyantse dispensary report for the year ending 31 December 1914.
29. OIOC L/P&S/12/143–69, Report of Dr Kennedy, forwarded in Charles Bell to Government of India, 5 December 1921.
30. OIOC, L/P&S/10/218–2120, Gyantse annual report 1922–23.
31. OIOC, L/P&S/12/4166–3840, Gyantse dispensary report 1935.
32. A starting point would be Elliot 1917.
33. So efficacious was the biomedical treatment of venereal diseases that it seriously affected the resort patterns at the IMS dispensaries and led to a (false) understanding of these conditions as endemic to Tibet, on which see McKay (in press).
34. This understanding appears common throughout the Buddhist Himalaya; see for example, Gaenszle (1994: 53–60).
35. For example, for two regionally extremely distinct studies showing similar processes, see Bretelle-Establet (1999: 171–203) on French colonial medicine in southwest China, and Dirar (2006: 251–80) on the Eritrean reception of Capuchin missionary medicine.

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Chapter 3

Tibetan Medicine and Russian Modernities[1]

Martin Saxer

Science and Modernity

Modernity has been a powerful notion for more than a century, in anthropology as in many other fields. Early diffusion theories have taken it for granted that Western modernity slowly penetrates and takes over every region on this planet, and social scientists such as Durkheim, Weber, Parsons and Elias saw the conflict of tradition versus modernity as critical for the evolution of humanity. The idea that modernization inevitably and effectively destroys cultural diversity lies at the heart of many anthropologists' endeavours, from Bronislaw Malinowski (1922) to Margaret Mead (1995) and Claude Lévi-Strauss (1965).

In the perspective of modernization theories from Weber (1921) to Rostow (1959) and Lenski (1966), modernity was seen as a Western phenomenon, often imitated by non-Westerners but never quite achieved. During the Cold War, China and the Soviet Union were often labelled as 'anti-modern' states because they lacked the basic triad of modern institutions as proclaimed by these modernization theories, namely individualism, capitalism and democracy. With the disintegration of the Soviet Union new and different understandings began to gain momentum, taking into account that the idea of modernity (without Western or capitalist flaws) was deeply entrenched in the socialist enterprises of change (Arnason 2000, Kandiyoti 2000).

Although modernity provides an underlying point of reference in so many academic, socio-political and cultural contexts, it has also remained rather vague as a concept. And perhaps its very vagueness is one of the

reasons for its success. By being vague the notion of modernity has been capable of adopting a variety of faces. Not only have capitalist and socialist theories of change and development referred to modernity, but also the various counter-tendencies such as the anti-Western, anti-capitalist or anti-scientific movements that have so characterized the modern era. In this sense, modernity has become hegemonic as even the most critical, anti-modern movements take it as a point of reference. As Wittrock puts it: 'The age of modernity is characterized by the fact that the opponents of emblematic modern institutions cannot but express their opposition, cannot but formulate their programmes with reference to the ideas of modernity' (2000: 38). The concept of multiple modernities (Eisenstadt 2000) seems useful in this context because it does not confuse modernization with Westernization. It provides a space for the analysis of these counter-tendencies. Over the course of the last century Tibetan medicine often found itself in such a role vis-à-vis dominant notions of modernity. From the Himalayas and the Tibetan Plateau to the steppes of Mongolia and the Buddhist enclaves in Russia, Tibetan medicine has been confronted with a variety of pre-, post- and socialist ideas of modernity, either struggling to become a part of them, opposing them or simply being ignored by them.

In all these notions of modernity that Tibetan medicine encountered science played a crucial role. Science provided these ideas of modernity with a means and an ethical basis. Modernization legitimated its push for a new, modern society with truth derived from a scientific world-view. The opponents of modernity often saw the projects of modernization as problematic precisely because they were based on science. But science, in their view, was seen as disconnected, erroneous, ignoring wisdom, religion and spirituality.

My exploration of Tibetan medicine in relation to the concepts of modernity in Tsarist Russia and the Soviet Union in the first quarter of the twentieth century demonstrates, however, that the protagonists of Tibetan medicine have seen their endeavours as distinctly modern, scientific and at the same time as being based on their understandings of 'religion'. One could also say that they developed a particular *sowa rigpa* sensibility (in the sense outlined in the introduction in this volume) by trying to overcome the assumed dichotomy between science and religion, a dichotomy they did not believe to be valid. In my view, the Russian case is particularly interesting as it is one of the earliest interfaces of Tibetan medicine with European thought and culture and shows the complexities of the ways in which the protagonists struggled to claim a space for Tibetan medicine in Russian and Soviet modernities.

I will start with a short summary of how Tibetan medicine came to Russia, followed by an account of a series of three interconnected events: the first translation of the main Tibetan medical text, the *Gyüshi,* into a European language and the public responses to it; a Buryat and Kalmyk request to obtain state recognition for Tibetan medicine; and an attempt to reform Tibetan medicine in the young Soviet Union. These three events highlight the different understandings of modernity, religion and science and the roles they played a hundred years ago in Russia.

Tibetan Medicine in Russia: A Short Summary

The history of Tibetan medicine in the territory of the former Soviet Union is closely linked to the history of Buddhism in Russia. There are three regions of the former Soviet Union where Tibetan Buddhism was and is again practised: the Kalmyk Republic, the Tuvinian Republic and 'Buryatia', which consists of the Buryat Republic and several smaller autonomous regions, like Aga-Buryatia (Aginskiy-Buryatskiy Avtonomniy Okrug). In the following, I am focusing on Buryatia.

According to Snelling (1993: 3–11) and Terentyev (1996: 60–70), migration of Buryat clans from Mongolia to the territory southwest and east of Lake Baikal began in the second half of the seventeenth century and continued in the eighteenth century. At about the same time the outposts of the Russian empire reached Transbaikalia.

The Buryats practised shamanism and at first were not particularly interested in Buddhism. Only at the beginning of the eighteenth century did Buddhism slowly start to penetrate the steppes and semi-steppes east of Lake Baikal. In 1712 or 1720 a group of around 150 monks from Tibet and Mongolia came to Buryatia. Among the group was an *amchi* called Chökyi Ngawang Phüntsog, said to have been an important founder of Tibetan medicine in Buryatia (Bolsokhoyeva 1999: 3).

Buddhism gained ground very slowly and only became an important part of Buryat culture in the nineteenth century. In 1850 thirty-four monasteries were counted and in 1917 a total of forty-five monasteries were up and running with a student and monk population of around 13,000 to 16,000 (Snelling 1993: 7, Terentyev 1996: 62). Several monasteries featured medical colleges.

In Buryatia, Tibetan medicine began to attract attention shortly after its arrival. In the mid-eighteenth century, when the German botanist and geographer Johann Georg Gmelin travelled through Siberia, he published a book about his adventures, including an account of his contacts with Tibetan

medicine (Gmelin 1751). He met a Buryat doctor of Tibetan medicine and described his methods and instruments (Dashiyev 1999: 10). Later, at the beginning of the nineteenth century, the Russian scientist Rehmann passed through Buryatia on an expedition to China and bought a 'Tibetan pocket pharmacy' with sixty Tibetan herbal drugs (Gusseva-Badmaeva et al. 1972: 164). He became very interested in Tibetan medicine and invited a Buryat *lama*, Sultim Tseden, to St Petersburg with the intention of establishing Tibetan medicine in the West. Sultim Tseden, however, died shortly after his arrival.

Another German traveller, Rudolf Krebel, visited Buryatia in the nineteenth century and wrote: 'In the whole of Southern Siberia Buryat physicians have a great reputation and their help is sought whenever serious diseases occur. I was assured that they regularly achieve surprising success and only seldom does a sick person leave their office without betterment.' (1858: 49f). In the 1850s, a hegemonic biomedical discourse had yet to come into being. Tibetan medicine was regarded as an interesting option, at least one worth trying. In fact, even the Russian army sought help from a famous Buryat physician by the name of Sultim Badma when they were plagued with a typhoid epidemic in southern Siberia. The general in charge, Governor General Muravyev-Amurskiy, was so impressed by the results of Sultim Badma's methods that he invited him to St Petersburg. In 1857 Sultim arrived in the capital and was appointed as assistant physician to the Nikolayevskiy Military Hospital. Later, he ran a private pharmacy and practice for Tibetan medicine in the city (Grekova 1998: 8–22).

The plan was to test Tibetan medicine and possibly establish it in Russia. An important part of this project was the translation of the *Gyüshi* into Russian. Sultim Badma was asked to attempt such a translation. Two philologists from the University of St Petersburg were appointed to assist him. The project was never completed, however, probably because the philologists did not know much about Tibetan medicine, and Sultim's Russian language skills were very basic.[2]

Translating the *Gyüshi*

A second attempt at translating the *Gyüshi* was made by Sultim Badma's famous younger brother Zhamsaran, who became known as Pyotr Alexandrovich Badmayev. Pyotr was more familiar with Russian culture than Sultim. General Muravyev-Amurskiy had paid for his education at the Russian Gymnasium in Irkutsk. After his graduation he joined his brother in the capital and started learning Tibetan medicine. He was baptised and became Pyotr Aleksandrovich Badmayev, his godfather being Aleksandr III, the Tsar's son and heir.

Pyotr entered the Imperial Military Academy in St Petersburg, but after a year he was expelled from the course because he failed to pay the fees. After Muravyev-Amurskiy stood as a guarantor for him he began studying again at the Oriental Faculty of St Petersburg. After graduation he matriculated a second time at the Imperial Military Academy. However, quarrels with his professors prevented him from passing the final examinations (Grekova 1998: 30–36). According to his grandson Boris Gusev, he opted out because of the required vow to use exclusively European methods of treatment. Whatever the reasons, he did not receive a diploma. At first, however, this was hardly a problem.

Pyotr's older brother Sultim died in 1873. By this time, Pyotr had already gained ground in St Petersburg. He married a noble woman and soon became an intriguing figure of the Russian elite. Having studied in the Russian gymnasium in Irkutsk, he was familiar with Russian culture and language, and as the future Tsar's godchild he was also well established in high society. Pyotr established a clinic on the Poklonnaya Hill just outside of St Petersburg. His practice was a tremendous success, with people such as the Minister of Finance, Count Witte, among his patients.

At the end of the nineteenth century, St Petersburg was one of the leading centres of Tibetology and research on Buddhism. Until then, the study of Buddhism had been an entirely philological enterprise. Texts were translated and analysed, but only little was known about actual Buddhist practice. When the Russian academics discovered Buddhism as a lived practice in their own hinterland, they were completely fascinated. In addition, a certain mysticism was widespread among the Russian elite at the turn of the century. People like the Roerichs and Madame Blavatsky were captivated by the mystical dimension of Buddhism and had many followers. As Snelling writes: 'This was a time of great ferment in Russian culture, and many people, growing dissatisfied with the conventionalities of Orthodox Christianity, were casting around for new spiritual directions' (1993: 9). Pyotr's attitude towards mysticism was ambivalent. He certainly knew how much it helped his ambitions, but at the same time, he felt Tibetan medicine had to open up. The new scientific biomedicine was gaining momentum at the end of the nineteenth century. The first vaccines developed by Pasteur and the identification of the tuberculosis bacillus by Koch had stirred tremendous hope and expectations. In addition, the proponents of this new scientific medicine began a harsh attack on every other medical system.

Translating the *Gyüshi* was key to Pyotr's endeavour, on the one hand, as a means of making Tibetan medicine known to a wider audience, and, on the other hand, by establishing it as a legitimate science in European Russia. He

invited Buryat scholars to help him with the translation; one of Badmayev's secretaries, Vishnevskiy, gave an account of the translation process:

> I worked for Pyotr Aleksandrovich Badmayev as an assistant secretary and I participated in the translation of the ancient Tibetan medical manuscripts into Russian. The work was done in the early morning hours before Pyotr Aleksandrovich left to receive patients in the city. […]
>
> The work itself was done like this: a box containing printed sheets was put on the table and passed to the old *lama*. A young *lama* accompanied him. The old man was sitting in an armchair at the table; the young *lama* was standing behind the armchair. […] The sheets were taken out of the box and put in front of the *lama*. He read what was written and translated it instantly from Tibetan into Buryat. Pyotr Aleksandrovich […] translated the *lama*'s words straight away into Russian. Tushlevich, the second secretary, and I […] wrote down what Pyotr Aleksandrovich was saying. After each session Tushlevich and I compared our texts and […] discussed our work with Pyotr Aleksandrovich.[3]

In 1898 Pyotr Badmayev's translation of the first two of the *Four Tantras* was published under the title *On The System of the Medical Sciences of Tibet* (*O Sisteme Vrachebnoy Nauki Tibeta*).[4] The foreword of the book boldly outlines its aims:

> The majority of the readers are most likely unfamiliar with Eastern literature, especially with its scientific genre. We therefore considered it necessary to give some elucidation concerning the following excerpts of the *Gyüshi*. We speak only about excerpts, because in presenting the *Gyüshi* we wanted to conceal everything that belongs to Buddhism and mysticism (*mistika*) and left only what, in our view, has a direct connection to the medical sciences of Tibet. This means: we excluded everything that belongs to the ignorance (*nevezhestvo*) and superstition (*suyeverie*) of Buddhist *lama*.

Pyotr Badmayev clearly emphasizes that Tibetan medicine is, in his view, a science. However, he argues that the *Gyüshi* is difficult to understand for a Western audience because it is written in a 'Buddhist language'. Thus, Badmayev does not call his work a 'translation' but 'excerpts' of the *Gyüshi*. Badmayev aims at factoring out Buddhist philosophy and terminology. For example, he does not mention the *Gyüshi*'s claim that certain illnesses have *karmic* causes, neither does he refer to the Buddhist framework therein.

By contrasting 'sciences' (*nauki*) with 'mysticism' (*mistika*), Badmayev reiterates the same strategic discourse as the proponents of emerging biomedicine and, in fact, commonly all proponents of modernity in relation

to anything 'traditional'. However, he never juxtaposed 'science' with 'religion'. In his view, Tibetan medicine as a science was perfectly compatible with religion, especially with the Russian Orthodox one. Thus, he places Tibetan medicine together with Russian Orthodoxy on one hand, and mysticism in the form of 'ignorance' and 'superstition' of the demonized Buddhist *lama* on the other. [5]

What did his fellow Buryat Buddhist countrymen say about this interpretation? To my knowledge, no direct comments are available, but in general, Badmayev's relations with Buryats and Buddhism were complicated. He ran a school for talented Buryat children in St Petersburg but urged them to adopt Russian Orthodoxy. This caused a lot of friction, and some Buddhist families called their boys back to Buryatia. One of Badmayev's students was Gombozhap Tsibikov, whose later studies at the University of St Petersburg were supported by his tutor. Tsibikov eventually became a famous Buddhist scholar and fell out with his former patron.[6] Badmayev had, however, also actively cultivated his relations with Buryatia through a trading company he had set up in Chita, a Russian outpost about a thousand kilometres east of Lake Baikal.

Pyotr Badmayev was a convert and an eager follower of Russian Orthodoxy, a Buryat who had spent most of his life among Russians, a dazzling personality, headstrong and peculiar. He was not at all alone in his criticism of what he called superstition and he echoed what was a rather widespread opinion among his fellow Buryat countrymen; many criticized what they perceived as unqualified doctors of Tibetan medicine (*amchi*). In Buryatia at the time, a power struggle between lineage doctors and monastically trained *amchi* was underway, with the latter affronting the former by accusing them of being poorly educated.

As for the recognition of Pyotr Badmayev's work on the *Gyüshi* (1898), his first edition received little response. The second edition, however, was hotly debated (Badmayev 1903). This debate was sparked off by a letter to the editor published in the newspaper *Novosti* in 1902, written by Isaac Solomonovich Kreindel, a physician from St Petersburg. Kreindel was convinced of two things: that Tibetan medicine could in no way measure up to Western medicine; and that Badmayev knew very little about either one. These convictions were the basis for his letter to *Novosti*. He went further and accused Badmayev of having mistreated some of his patients. As an example, he cited the story of the former director of the conservatory of St Petersburg, Fonark, who had been a patient of Badmayev. Fonark had died, and his widow had blamed Badmayev for her husband's death. This must have hurt Badmayev greatly, as the Fonarks were friends of his and

had spent much time on his *dacha*.

Badmayev sued Kreindel for libel. The case was brought to court in January 1904 and received extensive press coverage. At first, things looked quite good for Badmayev: several witnesses testified in favour of Badmayev, among them Fonark's brother. In addition, the only witness against Badmayev appeared to be disputable: his name was Chernashov, and he was involved in a quarrel with Badmayev about money.

In his final speech, Kreindel complained that people like Badmayev were allowed to treat patients, but in the end it was doctors like him who had to sign the death certificates. Badmayev intervened, saying that he had signed the certificate himself, and a witness confirmed his claim. Badmayev, however, had no right to do so, as he had no officially acknowledged medical degree. Thus the scales tipped against Badmayev. Kreindel was discharged and continued his fight against Tibetan medicine and the Badmayev family (Grekova 1998: 94ff).

It is worth noticing that of all things, it was the death certificate that finally changed the outcome of the case and the debate as a whole. Badmayev's defeat was caused not by his medical practice, but by diagnosing death, a field in which biomedicine claimed a monopoly from very early on and defined a new 'biological border regime' (Lindemann 2002). Thus, if one looks back at Badmayev's attempt to legitimize Tibetan medicine as a modern enterprise, a fully-fledged science, his defeat in court must have been even more distressing to him.

The Struggle for an Official Recognition of Tibetan Medicine

As mentioned above, Badmayev was not alone in his call for a modernization of Tibetan medicine. The monastic medical schools in Buryatia had themselves already embarked upon a similarly modernist project. Badmayev's scathing criticism echoed a Buryat debate of that time. During the second half of the nineteenth century, medical education in Buryatia underwent considerable changes. Before that time, an experienced *amchi* had one or more disciples who learnt Tibetan medicine in a very practical way over a long time, either within a monastery or often within a family lineage outside the monastic setting. These family lineages of Tibetan physicians were common and contributed to a vast amount of heterogeneity in the practice of Tibetan medicine.[7] Some of the Buryat

amchi lineages had an excellent reputation and some did not. The problem of undereducated *amchi* was thus widely recognized. Yet it was only in the second half of the nineteenth century that efforts to institutionalize medical education began to have a political impact.

In 1869, the first *manba datsan*[8] – as the medical schools are called – was founded in Tsugolskiy Datsan, one of the large monasteries in Buryatia. The curriculum of Labrang monastery in eastern Tibet (Amdo) served as a model. In the following decades, *manba datsan* were also founded in the monasteries of Aginsk and Atsagat. Basic studies lasted for four or five years, and the examinations were public, following the academic tradition of Tibetan Buddhism (Bolsokhoyeva 1999). The practical education component lay in the hands of the teachers and normally lasted much longer. Students would assist them in their practices and join the expeditions to gather medical herbs in the steppes and half-steppes of southern Siberia (Gammerman 1964: 582ff).

While Badmayev was fighting for his cause and reputation against Kreindel, a group of Buryats and Kalmyks decided that it was time to apply for official recognition of Tibetan medicine in Russia. The Buryat/Kalmyk proposal suggested five registered monastic medical colleges, each of which would offer a seven-year course in Tibetan medicine. An external independent examination committee would survey the final exams. In return, all acknowledged Tibetan doctors would pay taxes and all other practitioners (especially lineage doctors) would be banned (Grekova 1998: 103ff).

The proposal reads like a government bill trying to crack down on non-standardized practice of Tibetan medicine by branding it as 'illegitimate'. To some extent, it can be seen as a reaction to the circumstances, an attempt to consolidate and standardize the practice of those Tibetan physicians who had a monastic education. But it can also be seen as a proactive project of modernization, a project that resonates in many ways with Buddhist modernism or 'Protestant Buddhism' in South Asia, partly inspired and engineered by Henry Steel Olcott, Helena Blavatsky and the Theosophical Society who, ironically, were proponents of mysticism of a different kind. Olcott stressed rationality and experience in Buddhism and thereby saw it as completely compatible with modern science (Prothero 1995).

In which way and how far the Buryats and Kalmyks were indeed inspired by Buddhist modernism and/or Theosophy is beyond the scope of this chapter but there was at least one important link between Theosophy's modernist outlook and the Buryat/Kalmyk proposal: Agvan Dorjiev, a Buryat monk who had studied in Lhasa and had become one of the

Thirteenth Dalai Lama's tutors and later his close political advisor, was the driving force behind the Buryat and Kalmyk ideas to modernize Tibetan medicine. Dorjiev came to St Petersburg in 1899 as the Thirteenth Dalai Lama's emissary to the Tsar and initiated a *rapprochement*, albeit a short-lived one, between Russia and Tibet. Dorjiev's mission in St Petersburg highlighted the religious and spiritual aspects, associating Russia with Shambhala and the Romanov dynasty with incarnations of the White Tara. Mysticism had been in vogue in Russian high society at the beginning of the twentieth century and Dorjiev's presence in St Petersburg was certainly influential in these circles. Dorjiev was allowed to build a Buddhist temple in the outskirts of St Petersburg. Nicholas Roerich, the famous painter and Theosophist, was among the members of the temple's construction committee and designed the temple's glass windows. It was probably the encounter with Dorjiev that fuelled Roerich's interest in the search for Shambhala. There is also good reason to assume that Dorjiev's encounter with Roerich, as well as with renown orientalists and members of Russian high society such as Sergei Oldenburg, Fyodor Shcherbatskoy and Prince Esper Ukhtomsky, shaped his outlook and strategy for dealing with the Tsarist authorities (Snelling 1993; Andreyev 1991, 1993, 1994).

The timing for the Buryat and Kalmyk proposal was very good. On 17 April 1905, Nikolai II issued the edict of religious toleration that secured the freedom of religion in the Russian Empire (Löwe 1992). This was at least in part a reaction to the lost Japanese war and the fading Russian power in the east: the Tsarist authorities did not want to run the risk of the Buryats destabilizing the already very unstable eastern part of the Empire. Two weeks later, however, the medical council discussed the Buryat/Kalmyk request and turned it down completely. The head of the council, Leo Berthenson, later wrote in the weekly medical journal of St Petersburg, the *St. Petersburger Medicinische Wochenschrift*: 'Of course it was not feasible to grant Tibetan medicine the status of an acknowledged medicine, as it was nothing more than an archaic and rudimental science and a mixture of ignorance and superstition' (Berthenson 1906: 257, my own translation).

What is striking is that Berthenson uses the same words, 'ignorance and superstition' [orig.: 'Unwissenheit samt Aberglauben'], that Badmayev used in the foreword to his book *On The Medical Sciences of Tibet* (1898), in order to draw the fine line that separates modernity and science from the unmodern and unscientific, or from what he perceived as the old 'Buddhist version' of Tibetan medicine. And finally, one could argue that all of them – the proponent of 'scientific' medicine Berthenson, Badmayev and his

modern Russian orthodox version of Tibetan medicine excluding Buddhist traits, and the Buddhist Kalmyks and Buryats with their monastic version of an institutionalized Tibetan medicine – had the same concept in mind – to eliminate 'ignorance' and 'superstition' from 'medicine' – while the ascribed meanings of what these are, how they should be eliminated and what should be disseminated instead, together with their political agendas, differed considerably.[9] Thus all three parties involved – Badmayev, the Buryats and Kalmyks, and the adherents of the new bacteriology and developing biomedicine – saw their causes as distinctively modern and used very similar discursive strategies to fight for their cause. Berthenson was not entirely opposed to the practice of Tibetan medicine. He wrote: 'But apart from all that [rudimentary science, ignorance, and superstition] there is no need for regulations on the practice of Tibetan medicine as, according to Buddhist doctrine, the *lama* have to offer their services for free, and in this fact lies their right of existence, as our laws allow anybody to cure without charge' (Berthenson 1906: 257, my own translation).

If the argument did not concern the practice of Tibetan medicine as such, what was it then about? In my view, it was about validating or contesting a political claim to be part of modernity and thus a legitimate supplier of state acknowledged medicine. Let us look at what followed these events. The attacks on Tibetan medicine continued. The same Leo Berthenson called for the disinfection of all medical ingredients for Tibetan drugs that came from China or Mongolia (the 'evil East'), to make sure that no contagious disease could make its way to the capital. The metaphorical linkages between 'germs' and 'foreigners' is a well-known strategy of modernists that has been used elsewhere to mark off the unscientific and unmodern (cf., Metschnikoff 1877; Sarasin 2003, 2004). Thus armies in the East were threatening Europe, just as germs were trying to infect the body. This is exactly the metaphorical linkage that Berthenson used: the East was potentially dangerous, not only because of the Japanese, but also because of contagious diseases. Syphilis was said to have been widespread in Buryatia (Wilmanns and Richter 1995), just as venereal disease was said to plague Tibet (cf., McKay, in this volume).

Berthenson found a clause in the Russian medical law (No. 379) on the import of drugs and components of drugs: if they came from abroad, independent trustworthy laboratories needed to test each lot and confirm that they did not contain any poisonous substances. Apparently the clause was never really enforced, but there must have been frequent customs problems in Buryatia with herbs from abroad, as the Buryat/Kalmyk

proposal specifically called for the alleviation of customs' barriers in Buryatia. A few months later, in 1906, a certain Professor Przhebytek from the Military Academy of St Petersburg issued a warning against Tibetan medicine because of high levels of mercury and arsenic found in its remedies (Grekova 1998: 112).

The parallels with the recent enforcement of laboratory analysis of Tibetan medicinal herbs imported from Nepal to China[10] and the current discussions about mercury and other heavy metals in Asian medicines are striking.[11] It is also worth noticing that in the emerging field of biomedicine itself there were high expectations of mercury and arsenic and the detoxification of both. This research resulted in the production of Salvarsan and Neosalvarsan (Goodman 1919).[12]

The same Professor Przhebytek also warned against the use of Western medicines in Tibetan compounds, such as antipyrine, being a part of Badmayev's prescription, thereby symbolically reinforcing the thin line between modern scientific medicine and Tibetan drugs. The latter had to be purely 'traditional', and therefore the use of an ingredient like antipyrine was logically ruled out.

Modernist Movement in Buryatia

Despite all these setbacks the practice of Tibetan medicine continued to thrive. In 1913 Agvan Dorjiev founded a *manba datsan*, a medical college, in the monastery of Atsagat. It quickly became a stronghold of Tibetan medicine in Buryatia. In St Petersburg Badmayev continued to have high-ranking patient-cum-friends who protected him against the harshest animosities. However, with the advent of the First World War the situation started to change radically. Russia stumbled from the war into a revolution and a civil war.[13] The situation in Siberia after 1917 was very complex. In 1918 Japan began to move its troops forward to Siberia, using the port of Vladivostok. In around 1920, after six devastating years of war and revolution in Russia that had cost millions of lives, caused famines, and in many regions increased an already deeply rooted hatred against the Bolshevist powers, the Red Army slowly gained control over Siberia. With Japan still present in Siberia, it seemed wise to set up a buffer state between Russia and Japan. Buryatia was therefore declared independent in 1920 and was defined as the 'Far-Eastern Republic'. A moderate Bolshevist was appointed as its president. His name was Krasnoshchekov and he committed himself to a liberal policy towards Buddhism. As a result, Buryat

Buddhism flourished as never before. Old monasteries were renovated, and the official '*lama* population' rose above 16,000 (Snelling 1993: 204).

Despite this boom, Agvan Dorjiev, as well as many others, regarded Buryat Buddhism as degenerated and in need of reform. The Buryat monasteries were generally very rich, and enormous differences in wealth were common amongst the monks and *lama*. A reform movement assembled around Dorjiev which aimed at implementing a whole set of fundamental changes to monastic life. Dorjiev saw many parallels between Buddhism and Marxism, at least in the early 1920s. He liked the Marxist ideas of a simple life, justice and equality, virtues he saw as fundamental to monastic life. In October 1922, the first All-Buryat Buddhist congress took place in Atsagat, where the reforms were discussed. A fierce dispute between modernist reformers (*obnovlentsy*) and traditionalists took place (Andreyev 2001). In the end, and probably also under the pressure of the Bolshevist government, the resolution was passed that the *manba datsan* institution was to be renewed. The curriculum would include Western medicine together with Tibetan medicine, especially anatomy and Western diagnostics which were to be integrated. Only those physicians who had successfully passed the final exams would be allowed to practise. Private education and family lineages were to be discontinued. And last, but not least, the medical colleges should be open to everyone – monks as well as lay people, women as well as men. Treatment would be free of charge and would only focus on herbal remedies, and not on the use of massage, baths, *mantra* and so on. At the same time the union of religion and medicine was confirmed. The goal was a more professional and standardized approach, though not a secularization of Tibetan medicine. To increase the 'cultural value' of religion, however, the institution of the *tulku*, a reincarnate *lama*, was to be abandoned (Snelling 1993: 210f, Grekova 1998: 168ff).

The communist regime of the Far-Eastern Republic welcomed these transformations of the Buddhist community and the latter was given a certain degree of autonomy. However, the Far-Eastern Republic was short-lived and soon after Japan finally withdrew its troops from Siberia it was incorporated into the Soviet Union (Snelling 1993: 204–18). Conditions began to change again, not overnight, but in a lasting and radical way. Soon after Lenin's death in 1924, the Politburo saw clearly that its agricultural reforms were not working. The fixed and low prices for grain had the devastating effect that the peasants would not sell what they had produced, which led to shortages in the cities and hindered industrialization. There were rumours about total collectivization – a tremendously unpopular

measure (Maeder 2004). The regime was still reluctant to enforce it, but the idea was there, and Dorjiev himself thought that the conversion of monasteries into collective farms was not so bad. He said that farm labour was well in line with the Buddha's teachings. The first steps in this direction were taken in 1926, when the monasteries in Buryatia were nationalized, meaning that the responsibility for the management was transferred to collectives of lay people. The clergy was deprived of its power which led to much hostility. Nevertheless, the monasteries remained active, and the position of the reformist forces was again strengthened.

In 1927, a second conference of Tibetan physicians took place in Atsagat. Again led and managed by Dorjiev, propositions for a future standardization of Tibetan herbal medications were discussed, including a central institution to supervise the production of herbal remedies (Grekova 1998: 173). At the same time, the Buddhist temple in Leningrad was revived. It had been looted and abandoned during the hunger-winter of 1919, but now became officially recognized as the Tibetan-Mongolian embassy. Fyodor Shcherbatskoy, a leading figure of the pre-revolution St Petersburg Orientalist elite, still held his position as head of the Orientalist school in Leningrad, and his contacts with the temple remained strong. A Tibetan pharmacy was established, and two *amchi*, Balzhir Zodboyev and Shchoyshi Dhaba Tamirgonov, practised at the temple's premises (Andreyev 1991, 1994).

The temple became the stronghold of the reformists. The international, cultural, philosophical and atheist aspects of Buddhism were highlighted, and the temple was seen as the locus of the encounter between East and West, an outlook that had again many similarities with Buddhist modernism in South Asia, Theosophy and Anagarika Dharmapāla's Mahābodhi Society. There were, however, also considerable differences. The mystic side of Buddhism that once had been so strong was now completely absent: there was no mention of Shambhala or the Kālacakra Tantra. This was certainly a necessary political survival strategy. On the other hand, an atmosphere of 'departure', of a bright and modern future was prevailing in the young Soviet Union (see, for example, Maillart 1997). Regulations were not as strict as they used to be, and the regime even tolerated a certain degree of private initiative on the premises of the temple. Besides the pharmacy and the two *amchi*, there were several small shops around the temple that sold rice, spices, incense sticks and religious objects.

In 1927, the first All-Soviet Buddhist congress took place in Moscow. During the conference the regime decided to fund the establishment of an institute for Buddhist culture and appointed Shcherbatskoy as rector.

Despite this partial success, the general trend in which the Soviet regime developed gave no reason for optimism. In the autumn of 1929 the party leadership (completely dominated by Stalin after Trotsky had been exiled) finally made a decision in favour of the total collectivization of agriculture (Dohan 1976, Terentyev 1996: 64f, Maeder 2004). The Politburo was convinced that the supply problems in the industrial centres could only be solved with the implementation of big collective farms, the so-called collectivization, accompanied by an enormous propaganda campaign. This campaign not only endorsed collective farms, but also denounced everything that was deemed to inhibit the progress of modernity in the Soviet Union (Kandiyoti 2000: 58f). Monasteries and *lama*[14] suffered a lot under this campaign. The argument against Lamaism was straightforward and easily understood in the socialist milieu. A considerable part of the male Buryat population lived in monasteries, which was deemed a waste of work force. Accordingly, the *lama* were called 'parasites' who lived an easy life at the expenses of the working class. They were (among many other groups) blamed for the economic problems of the socialist state.

Interestingly, the Soviets used a biomedical metaphor to discredit Lamaism: Buddhist *lama* were like parasites on a sound body. The image was strong and clear – they had to be eliminated in order to 'purify' Soviet society. In 1929 religious institutions were no longer allowed to run medical facilities and treat patients. The new bill was clearly targeted at Tibetan medicine and the hopes of Agvan Dorjiev and other like-minded people were destroyed. Communism and Buddhism finally proved to be incompatible. The practise of Tibetan medicine was no longer allowed in monasteries. The whole Buddhist reform movement was labelled 'anti-Soviet' and 'reactionary'.

The newspaper *Buryat-Mongolskaya Pravda* started to campaign against the reformists (Grekova 1998: 267–73), who were accused of being worse than the normal reactionaries because they were like wolves in sheep's clothing. One monastery after another was shut down, most of them during the second Five-Year-Plan implemented between 1933 and 1937. The monks either fled to Manchuria or were deported or killed and most of the monasteries were destroyed (Snelling 1993: 236–254). The Stalin purges effectively brought an end to the institutionalized practice of Tibetan medicine in Buryata. Only in the 1960s did it slowly start to recover again.

Conclusions

All three protagonists in this chapter – Badmayev, the Buryats and Kalmyks seeking recognition, as well as the Reformists around Dorjiev in the 1920s – presented Tibetan medicine as a contemporary endeavour, something that was at its core already modern and scientific and therefore compatible with larger-scale changes in society in which notions of modernity, in one way or the other, acted as a driving force. Badmayev aimed at liberating Tibetan medicine from its Buddhist terminology (and thereby from what he understood by 'ignorance' and 'superstition') to present it as a modern 'scientific' endeavour that was still compatible with an Orthodox Russian empire. The Buryats and Kalmyks sought recognition for their own versions of Tibetan medicine – a medicine liberated from 'charlatans' and non-institutionalized, chaotic Tibetan medical lineages, yet also a medicine that represented part of their autonomy and religious freedom, which Russia had always granted to them despite, at times, uneasy relations. And finally, the Buryat reformist movement in the early 1920s aimed at liberating Tibetan medicine from 'monastic distortions' (but not from Buddhism), opening it up to scientific Western medicine, and at the same time bringing it back to its Buddhist roots which were in a sense compatible with Marxism: monasteries could be seen as prototypal Marxist communities in line with the Buddhist notion of a *sangha*. All three attempts to become part of either imperial Russian or Marxist-Leninist modernity failed. Despite its adaptations, Tibetan medicine was not granted access to the realm of the modern.

In their defeat lies a paradox: in which ever modern way Tibetan medicine was appropriated by its different agents it did not succeed in fitting in with the fast changing winds of Russian imperialism and socialist modernity. Thus finally, one could argue that all of them – Badmayev and his modern Russian Orthodox version of Tibetan medicine (excluding the Buddhist traits), the Buddhist Kalmyks and Buryats with their monastic version of an institutionalized Tibetan medicine, and, in a certain way at least, even the proponent of scientific Western medicine Berthenson – had the same concept in mind, the modernization of Tibetan medicine, although in very different ways. This modernization entailed the elimination of what they understood by 'ignorance' and 'superstition', as well as the promotion of the standardization and legalization of 'medicine'. However, the meanings ascribed to the 'anti-modern' concepts of 'ignorance' and 'superstition' stood in stark contrast to each other. Would they have succeeded if they had been more unified in their push for a modernized Tibetan medicine?

Regardless of the outcome, the fact remains that the proponents involved regarded their cause as being distinctively modern. Of course, they were reacting to radical social changes that allowed them few options. But to regard their actions and aspirations as a mere response to a strong stimulus would mean to deprive them of any agency. Badmayev, as well as the Buryats and Kalmyks, clearly saw 'promissory notes' (Wittrock 2000) in the concept of modernity. They saw the changes around them not only as a threat to Tibetan medicine but also as an opportunity, albeit one which proved to be in vain.

We may then ask whether the concept of plural or multiple modernities is still valid and useful for analysis. My answer would be yes: it is precisely the shift from arguing within the framework of modernity to arguing about the framework of modernity that enables us to analyse the dynamics of establishing a certain flavour of modernity. Indeed, this shift may help to acknowledge the varied reasonings and strategies involved in claiming a space for multiple modernities of Tibetan medicine in different contexts.

Notes

1. The data presented in this chapter is based on the memories of Badmayev's descendants as well as on archival materials held by several branches of the family in Buryatia, Moscow, St Petersburg, and the U.S. I also had access to the archives of Padma Inc. in Switzerland, documents and photographs at the Centre for Eastern Medicine in Ulan Ude, as well as the collections of the small museum of the monastry in Atsagat, the Museum of Buryat History in Ulan-Ude and History (Musei Istorii Buryatii imina M. N. Khangolova) and the photographic collections of Franz Reichle and Andrey Terentyev. For many insights about Buddhism in Russia and its political entanglements, I am grateful to Alexander Andreyev. This chapter also builds on the excellent work of Tatjana Grekova who very openly shared her insights and archival materials with me. And finally I am grateful for the critique by the anonymous reviewer and the discussions with the editors of this volume. I would like to thank them all for their valuable contributions.
2. Personal communication with Sultim's grandnephew Boris Gusev, Moscow 2003.
3. Letter by Evgeniy Ivanovich Vishnevskiy to his son Pyotr Evgeniyevich Vishnevskiy, written in 1955, Badmayev family archive in St Petersburg, my own translation from Russian.
4. See Badmayev 1898 (foreword), my own translation from Russian. Badmayev also began a translation of the third of the *Four Tantras* but never completed it. Those manuscripts remain unpublished in the Badmayev family archive in St Petersburg.
5. Badmayev's surgery featured, for example, several Russian orthodox icons and he occasionally asked a patient to pray in front of them (interview with his grandson Boris Gusev, August 2003).

6. In 1899, Tsibikov left for Tibet where he stayed for around three years and took some of the very first photographs of Lhasa and Central Tibet (Tsibikov 1904, Kuleshov 1996: 25, Schaumian 2000: 18, Andreyev 2001). Tsibikov was often called a Russian spy – a consequence of the Great Game, the secret struggle over influence in Central and Eastern Asia between the Russian and British Empires (for an overview see Hopkirk 1990; for Badmayev's part in it see Gusev 1995, Grekova 1998, Gusev 2000, Saxer 2005).
7. Specific lineages of Tibetan medicine also existed in Tibet and Mongolia and there was a similar process of institutionalization in Tibet (Janes 1995: 12).
8. *Manba* is derived from the Tibetan *menpa* (physician). *Datsan* is the Mongolian and Buryat word for monastery or college, derived from the Tibetan *dratsang* (monastic college).
9. It is worth recalling that biomedicine was still very much struggling with older European medical paradigms at the time (and confronting them with similar rigour). Penicillin had not yet been discovered and the initial hope for a quick development of vaccines against many diseases gave way to disillusionment.
10. China's Drug Administration Law, which came into effect in December 2001, stipulates that all imported drugs, from antibiotics to herbs used in Tibetan medicine, have to undergo tests before they can be used in the People's Republic (SFDA 2001, articles 39–41 and 81). The regulations have been more strictly enforced since Summer 2008 (interviews with various cross-border herb traders in Nepal and Tibet in Autumn 2008).
11. Cf., Espinoza et al. 1996, Aschoff and Tashigang 1997, Estrada 1999, Garvey et al. 2001, Ernst 2002, Winteler 2002, Saper et al. 2004, Mino and Yamada 2005, Nash 2005.
12. Salvarsan was an arsenic-based compound against syphilis discovered by Paul Ehrlich in 1908 and launched in 1910. It was initially heralded as a miracle cure for syphilis. Later news about severe side effects discredited the drug. Salvarsan was superceded by the less toxic Neosalvarsan in 1912.
13. Badmayev, being an upright royalist, was repeatedly arrested and finally died in 1920.
14. In this context, all monks were usually referred to as *lama*.

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Part II

Producing Science, Truth and Medical Moralities

Part Two continues to frame Tibetan medicine's various encounters with modernity by moving from context to content, and by engaging in epistemological discussions about the relationships between Tibetan medicine and science, truth and medical moralities, as well as plays of culture and identity that emerge from these encounters. Chapter Four begins with the role that Tibetan medicine has come to play inside and outside the Tibetan exile community. Kloos argues that Tibetan medicine is clearly linked to a politics of identity in Tibetan exile. These politics transform the Dharamsala Men-Tsee-Khang into the biggest and most important internal and external flagship between the exile community and the 'world'. Men-Tsee-Khang physicians and patients associate the global development of Tibetan medicine with the survival of Tibetan culture and Buddhism. As with other chapters in this section, Kloos is concerned with the ways in which professionals of traditional Tibetan medicine make sense of, translate, theorize and/or put into practice biomedical technologies and disease categories that are deemed useful in the effort to complement, legitimize and/or sometimes replace Tibetan traditional diagnostic and treatment methods.

Chapter Five by Adams, Dhondup and Le shows how biomedical technologies are used to confirm and legitimize traditional recipes, diagnostics, effectiveness and potency of Tibetan medicine. This contrasts with the more common focus on processes that suggest a purely biomedicalization or supplanting set of processes. Interviews with doctors and researchers at the Tibetan medical hospital, factory and research department of the Arura Group in Xining, Qinghai Province, demonstrate how efforts are made to affirm and preserve and at the same time scientifically prove Tibetan medicine by using biomedical technologies. Where differences between laboratory test or ultrasound outcomes and

traditional pulse and urine diagnostics occur, more often than not Tibetan doctors, basing their decisions on their practical experience, rely upon the latter. For example, Tibetan medical diagnosis are assumed accurate in the case of a bile imbalance by most Tibetan doctors, even if gallstones cannot be seen on the ultrasound. On the other hand, a compromise cannot always be found by smoothly integrating the different diagnostic outcomes and technologies. Biomedical evidence of gallstones detected on the ultrasound does not automatically translate into a *tripa* disorder if the pulse diagnosis indicates an imbalance of *lung*. However, this example of an actual practice of negotiating different disease etiologies, diagnostics and treatments between Tibetan and biomedicine in Xining shows that theoretical discussions among doctors of Tibetan medicine trying to find matching disease categories between the two systems – such as with *drä* (*'bras*) and cancer – are doomed to remain unresolved (cf., Czaja's chapter).

Barbara Gerke's chapter begins with a discussion of current debates on Tibetan medical terminology and translation in relation to biomedical understandings and terminologies. Based on an examination of the simplified translation of the three *nyépa* as 'humours', she discusses the polysemous terminology constructions in textbooks of Tibetan medicine at both the Lhasa Mentsikhang and the Dharamsala Men-Tsee-Khang as well as the latter's newly 'scientized' creations of Tibetan medical terms. Like Czaja in section four, she concludes that internally, among those Men-Tsee-Khang doctors, there is no unified terminology when it comes to translating between Tibetan and Western medicine. Therefore she suggests that ethnographic accounts of medical practice might be the only way to find out how such translation processes work in particular. Her own ethnographic account based on interviews with Amchi Jamyang shows how he 'scientizes' Tibetan medicine, finding compatible similarities between *zungtrag* and 'haemoglobin'. Even though the *amchi* fully trusts in his own pulse and urine diagnosis, he uses blood tests in order to prove the efficacy of his treatment to patients who are more familiar with Western medicine.

The three chapters in Part Two demonstrate the complex negotiations between different approaches and practices, while also reminding us that as medical systems, they need to be understood in the context of both national identity politics and public health. They also reveal, however, that many of these negotiations, whether comparative or integrative, often remain contested among professionals. Rather individually, in medical practice each doctor finds his/her own way of translating, combining or separating diagnostic and treatment methods in and between Tibetan

medicine and biomedicine. Tibetan medicine is just starting to be recognized as a worldwide acknowledged 'scientific' medicine when compared to other traditional medical systems of Asia – a fact that its representatives are painfully aware of and often try to counteract.

Chapter 4

Navigating 'Modern Science' and 'Traditional Culture': the Dharamsala Men-Tsee-Khang in India[1]

Stephan Kloos

'Although we are refugees, through Tibetan medicine we can help the world.'

Introduction

When Dr Tsering casually made this remark in a conversation about Tibetan medicine, it was almost fifteen years since he had crossed, as a teenager, the mountainous border between Tibet and Nepal, and made his way to Dharamsala in India. His brother was already a monk there, and his letters, promising good schools and the opportunity to learn English, had convinced Tsering to go and try his luck. While visiting Tsering in the Tibetan clinic in the hills of northeastern India,[2] where he worked as the resident physician or *amchi*, I was struck by the change in outlook represented by Tsering's personal history and reflected in the quotation above. Clearly, the motivation to become a refugee in a foreign country had not been to help the world; yet here he was, offhandedly telling me that this was what practicing Tibetan medicine in exile was all about, as if it almost went without saying. And he was not alone: *amchi* after *amchi* I talked to voiced the same sentiment: '…Through Tibetan medicine we can help the world.'

In many ways, Dr Tsering's story recounts the experience of the Tibetan community in exile. In 1959, when the Fourteenth Dalai Lama and thousands of Tibetans fled from their homeland to India, they faced the challenge of reorganizing themselves as a people without land, a population without territory. At stake, or so it seemed, was survival: the sheer physical

and economic survival as refugees in a poor host country, but also the survival of 'Tibetan culture', threatened by the conditions of exile as much as by the Chinese communists. The reestablishment of the Men-Tsee-Khang (the Tibetan Medical and Astrological Institute, henceforth abbreviated as MTK) in Dharamsala in 1961 was seen as integral to this effort in both senses – the physical and the cultural. Dr Lobsang, a senior Men-Tsee-Khang *amchi*, told me: 'The most important reason for the establishment of the MTK, when we had to flee Tibet, was to preserve our culture. Second, to give service to the Tibetan community and the Himalayan people. Now also other people benefit from Tibetan medicine.' This statement is remarkable: it is fairly obvious that a medical institution can save lives in the case of sickness; but how, exactly, does the Men-Tsee-Khang 'preserve' Tibetan culture? What is this 'Tibetan culture' supposed to be in the first place? And, finally, what does 'helping the world' have to do with it?

The Men-Tsee-Khang

To begin with, I suggest that the statement can be read not only in a hierarchical way (in the sense that it concerns priorities), but also chronologically, in that it reflects the Men-Tsee-Khang's expanding sense of purpose over time. While the original intention behind the re-establishment of the MTK (among other institutions) was, quite explicitly, the preservation of Tibetan culture, the practical challenge soon became to provide health care to the Tibetan refugee community. In the early 1960s, this was anything but easy, as is revealed by interviews with Dr Yeshi Donden (the MTK's founder), T.Y. Tashigang, Dr Lhawang and Jigme Tsarong – all of them key players in the institute's history. In the words of Jigme Tsarong, MTK director in the 1970s, 'They were just trying to survive.' For the first four years after its establishment in 1961,[3] the MTK in India existed more as a goal than a real institution, lacking as it did everything from money to medicines, medical texts, human resources, legal status, or even the basic linguistic capacity of its doctors to interact with the local population. In 1965, it gained quasi-legal recognition and basic material support from the Indian government.[4] However, it was not until the late 1960s and the 1970s that the institute was able to attract foreign aid, began to become more professional, and expand to other Tibetan settlements on the subcontinent. Thereby, it took its second purpose of serving the Tibetan community more seriously. Today, the MTK is the

largest and most successful institution of the Tibetan government in exile, and occupies a central place in the life of the Tibetan refugee community. Indeed, the large MTK headquarters in Dharamsala almost constitute a little town, and oversee the operation of fifty branch clinics in India and Nepal. As of March 2010, the institute had more than 120 physicians and several hundred staff members. With the increasing demand for Tibetan medicine from the Tibetan community as well as from Indians and foreigners, the importance, scope and profile of the MTK is expanding rapidly. Indeed, the future looks bright, as the optimism of the institute's staff attests:

> In the last fifty years, Tibetan medicine has gained a lot of popularity and got exposed to many different people, from different nations. I think in twenty years it will even have legal status in America! And also in other places, because we have been working hard on it, our council and our institute [the MTK]. … And, in twenty years, hopefully one or two Tibetan doctors get the Nobel price for medicine, for curing AIDS. (Dr Tsering Jigme)

> I see a great future for Tibetan medicine. Johnson & Johnson, Hoechst, Bayer, all the big pharma companies will invest millions in Tibetan medicine. It will become very big, it already is big business in Tibet. (Jigme Tsarong)

Clearly, after forty-five years in exile, the MTK today has very different preoccupations and concerns than it had in its early days. In order to make some sense of this remarkable shift of focus from survival – the starkest form of 'care for the self' – to global expansion in which commercial interests mingle with a rhetoric of altruism ('giving service', 'helping the world') – the quintessential 'care for others' – it is helpful to ask the initial question again: how exactly does the MTK 'preserve' Tibetan culture, as its mission statement claims? I suggest that there may be more to this idea than simply ensuring the continuation of Tibetan medicine – seen as a part of Tibetan culture – in exile. Rather, I argue that the MTK is involved in a redefinition or production of its own identity as quintessentially 'Tibetan', with obvious implications for the institution's changing views of what defines 'Tibetan culture'.

This redefinition has turned a once desperate refugee health centre into a global purveyor of ancient knowledge and health; in short, into an institution that can help the world. As such, the MTK reflects a wider exile-Tibetan discourse, which argues that the survival of Tibetan culture is important in order to preserve Tibetan Buddhism, again for the benefit of all beings (Strøm 1995, 2001). The equation of Tibetan culture with modern

Tibetan Buddhism, defined as an ethics of compassion and altruism, is key to the MTK's ethical practice of survival, which conflates the care of the self with the care of others. On one hand, the definition of Tibetanness as something of universal value generates international financial support, which was a key factor in the MTK's rise to its present position. On the other hand, equating Tibetan identity with a particular ethics helps the MTK to 'preserve' its most valuable asset – Tibetanness – despite its rapid modernization and transformation of 'traditional' Tibetan medical practice.

Tibetanness

It is possible to discern three rhetorical themes in the MTK's attempts at cultural preservation and survival that have been described by a number of scholars concerned with contemporary constructions and representations of Tibetanness. The first and most basic assumption informing efforts at cultural preservation or survival, Adams (1996: 515) writes, 'is that Tibetan culture is itself at risk of total annihilation'. Although this perception can be explained through modernist/orientalist Western fantasies of a Shangrila in need of protection (Adams 1996, Lopez 1998, Huber 2001), Barnett (2001: 273) argues that this image of a threatened or 'violated specialness' is largely the result of the exile-Tibetan leadership's strategic choice of representations since the mid-1980s.

The second assumption is that Tibetan culture coincides with a modernized Tibetan Buddhism, and with the person of the Dalai Lama as its main proponent (Huber 2001, Adams 1996, Barnett 2001, Houston and Wright 2003, McGranahan 2005). Although Tibet has, since the nineteenth century, been imagined as a place of mystic spirituality (e.g., Lopez 1998, Pedersen 2001), Huber notes the Dharamsala elite's consistent efforts since the 1970s to project to the world a Buddhist-modernist representation of Tibetan Buddhism and culture. Indeed, he claims, 'the newly exiled Tibetans learned about identity construction from Buddhist modernism and international Buddhism' (2001: 362), which downplayed cultural, ritual and metaphysical content in its reinterpretation of Buddhism as a rational and universal vehicle for social (and environmental) reform.

This leads to the third theme in contemporary constructions of Tibetanness, namely that Tibetan culture (equated with Tibetan Buddhism) is something of universal value and therefore worthy of international support and protection. Indeed, (Tibetan) culture has become an economic and political resource (Adams 1996, Huber 2001), creating pressure on

Tibetans to conform to projected images of Tibetanness in order to receive Western sponsorship (Houston and Wright 2003). Universal value and appeal, furthermore, requires engaging people in a shared image of Tibet rather than addressing specific political interests. This has, according to Barnett (2001: 289), led the exile-Tibetan leadership to adopt the largely moral – and, he argues, apolitical – discourse of human rights in their struggle for a free Tibet.

While making an important argument, Barnett's separation of morality and politics is problematic, especially in light of the traditional Tibetan form of government (Wangyal 1975), which combines religious and political power (*tensi nyidän/ chösi nyidän*). Indeed, the use of religio-moral ideals for political ends is hardly new (nor confined to Tibet), and despite the sense of novelty suggested by events like Buddhist modernism or recent political strategies of the exile-government, it is important to consider certain continuities in the MTK's current rhetoric concerning Tibetanness. References equating the study of medicine with the spiritual practice of a *bodhisattva* (helping others) can be found throughout the Tibetan canon; Schaeffer (2003) links the political instrumentalization of an ethics of altruism in medicine specifically to the institutionalization of *sowa rigpa* under Desi Sangyä Gyatso in the seventeenth century. By linking textual medical scholarship with the Bodhisattva ideal, he argues, Sangyä Gyatso conferred authority on a certain group of medical scholar-practitioners at the expense of those lacking textual knowledge. In practice, this translated into a de-legitimization of practitioners from non-institutional backgrounds – who could not compete with the philological expertise of their institutionally trained peers – not merely on medical but also moral (Buddhist) grounds.

Without doubting its genuine character, the MTK's current rhetoric of equating an ethics of altruism with 'being Tibetan' and of positioning itself as 'representing Tibetanness' can therefore be understood as having political and economic functions. While the important implications of this rhetoric within the field of Tibetan medicine in India and elsewhere are the topic of ongoing research, this chapter will explore how these themes play out in the MTK's engagement with modern science. In the context of diasporic dispersion and, ironically, of a strategic universalization – one could say 'de-culturalization' – of modern Tibetan Buddhism and culture, the old markers of identity (place of origin, language, customs, dress) cannot by themselves constitute the Tibetanness of the new MTK anymore. Yet, while increasingly needing to allow for some inevitable adaptation to the modern world, Tibetanness as an identity still has to fulfil its function of conveying a distinct

sense of community and belonging. In the following, I will focus on one of the most important strategies by which the MTK achieves this redefinition, and argue that the MTK is involved in the production of an ethical Tibetan subjectivity, suitable for the diasporic context.

Science

In order to help the world, one needs to engage with it, and today there exists an absolute agreement among MTK staff regarding the domain of this engagement: science. Indeed, when it comes to matters of life and medicine, Western discourses of science have infiltrated global and local networks of markets and governance to such an extent that it has become virtually impossible for medical institutions to achieve legitimacy without reproducing them. This authority of science to legitimize certain practices and knowledge by 'proving' them and to de-legitimize others by either 'disproving' or simply dismissing them as 'unscientific', is based on its claim to universality, objectivity and neutrality. In other words, science derives its power from elevating itself above culture, society and politics, while making simultaneous efforts – sometimes with the involvement of anthropology – to show how all other knowledge and practices are, by contrast, local and therefore culturally and politically contingent. This view has been critiqued for some time now, by authors pointing out the socio-cultural, political and even religious origins of Western science and its paradigms (e.g., Foucault 1977; Bajaj 1988; Latour 1986, 1988, 1990, 1993; Apffel Marglin 1990). In particular, Latour's oeuvre provides a clear argument that science is not separate from culture, society and politics, and is therefore anything but neutral or objective. As Langford (2002: 210) puts it, 'It might be said that science's most dazzling show is its illusion of objectivity.' Despite such valuable critiques, however, the show goes on.

The language of objectivity and neutrality has fundamentally shaped the concepts of belief and knowledge that science works with. As Byron Good (1994) argues in his critique of what he calls the empiricist paradigm, 'belief' – which used to express faith in someone or something – has come to connote, over the centuries, the opposite of knowledge in much of Western scientific discourse (cf., Pigg 1996). Knowledge, in this line of reasoning, is only what pertains to, or actually represents, an objective nature separate from language and culture, a nature that is seen as fundamentally static, material and tangible. Furthermore, as Latour (1986) convincingly argues, scientific proof through which knowledge is created

has to be visible in order to be accepted. Over time, what is observed by science has moved away from the professed object of knowledge – nature – to the graphs, screens and printouts of diverse apparatuses (ibid.), which are now taken as signs of nature. Anything else that people might think they know is, according to the empiricist paradigm, merely belief, and therefore neither knowledge nor the truth. Consequently, it is an easy slippage from the category 'not the truth' to the category of 'untrue' and, therefore, 'false'.

This binary logic of reducing reality to opposites is what Apffel Marglin (1990) calls – following Derrida (1976) – 'logocentrism', and what provokes Visvanathan's (1988) scathing critique of science. According to him, (modern) science is inherently violent, both because of its vivisectional approach to knowing the truth, and because of its mandate of progress that renders 'unscientific' things, knowledge or even peoples obsolete and therefore dispensable. For Shiva (1988), reductionism – inseparably linked with capitalist logic – makes science undemocratic and, indeed, absurd: 'Picking *one* group of people (the specialists), who adopt *one* way of knowing the physical world (the reductionist), to find *one* set of properties in nature (the reductionist/mechanistic), is a political, not a scientific, act… The knowledge obtained is presented as 'the laws of nature' – wholly 'objective' and altogether universal' (Shiva 1988: 236; emphasis in original). Clearly, for these writers science is not only amoral but immoral, and to be contrasted with a moralized, idealized and orientalized notion of 'local knowledge' like, for example, Tibetan medicine.

What then do the practitioners of Tibetan medicine in India think about science, and how do they and the MTK engage with it? In my conversations with such practitioners, which frequently revolved around the differences between Tibetan medicine and Western science, I was struck by the recurrence of the above writers' arguments, especially since none of the *amchi* had read any of them. Jigme Tsarong offers a particularly eloquent example of what seems to be the standard discourse of contemporary Tibetan *amchi* in India:

> Western science and Tibetan medicine are two completely different ways of thinking. Western science is mechanistic and structural, Tibetan medicine is dynamic, processual. In Western science, it has to be visible in order to be true. It has to be visible for people to believe in it. It's not like this in Tibetan medicine… The only difference is, we recognize the mind and its influence on matter. But on matter alone, there's no difference between Western science and

> Tibetan medicine. But modern medicine has taken it to an artificial level … They take one plant and isolate one active substance, and then synthesize it. The reason why they do this is of course to make money. But it's disrupting the balance, and this creates trouble … There are so many adverse affects, so many lawsuits! … But clinical trials should not be necessary at all: this medicine has worked for thousands of years. It's just a way for the big pharma companies to keep out competition. They know that a clinical trial costs millions of dollars, and they know that we don't have that money.

We can see how this common portrayal of Western science among Tibetan doctors in exile coincides, down to the last detail, with the arguments of Latour and the proponents of post-colonial science studies. Both give us the following characteristics of science: it is structural and mechanistic, rather than dynamic (cf., Apffel Marglin 1990, Visvanathan 1988, Shiva 1988); scientific proof, and thus truth, depends on visibility, to the neglect of all other senses (cf., Latour 1986); science is artificial rather than natural (cf., Alvares 1988); science is reductionist, looking for only one cause of illness or one active chemical in a plant, while remaining blind to the totality and interconnectedness of things (Shiva 1988); it is inherently linked to capitalism, hence the fundamental motivation to make money, and hence also the lavish funding it enjoys (Shiva 1988); and finally science is hegemonic, setting the parameters for truth and untruth, and forcing other systems of knowledge to compete with it on uneven terms (cf., Nandy 1988b, Alvares 1988).

As the *amchi* pointed out to me, Tibetan medicine is indeed forced to compete with science and biomedicine, and they were well aware that the playing field is uneven. Epistemologically, the scientific imperative of visibility was seen as the biggest problem. After all, the fundamental concepts of Tibetan medicine, such as the three *nyépa* ('humours') or the eight potencies of medicines, are not accessible to the eye. Dr Phurbu described the problem like this:

> In Western science, they have to see with their own eyes, they never believe in *yéshé* [experiential wisdom, see below]. Only if it's visible to the eyes, then they accept it as proved. Only then it's a fact for them. Also, it needs to be presented to other people. So if it's visible, it becomes science … Also, I told you that amla[6] has the potency of coarseness in Tibetan medicine. But if you do research, you don't find coarseness. Only if you take it, in your body, then you know it's coarse. Or wind disorder (*lungné*).[6] You don't see the wind in the body; you can't find it with science. Not even the wind outside, you don't see it. You only see the leaves moving.

In other words, the only proof that Tibetan medicine has to offer, in regard to its basic theory, is subjective and experiential, rather than objective and visual, and thus in danger of being classified as mere belief and therefore false. The challenge for Tibetan medicine, then, is to prove its concepts by the new, and not very suitable standards of Western science, that is, by finding ways of making them visible through clinical trials. However, this is where the second disadvantage becomes clear: as Jigme Tsarong pointed out above, to conduct such clinical trials requires funds that the Tibetan community in exile simply does not command. The playing field is thus uneven both epistemologically and economically, since, as Tibetan practitioners never tire of pointing out, science and biomedicine enjoy lavish funding. Although *amchi* admire biomedical efficacy, one of the most frequently made arguments is that if Tibetan medicine were to receive the same amount of funding as biomedicine, the two would easily be on a par. But apart from such an easy, hypothetical assertion of self-worth, the question arises: how do the Tibetan practitioners in exile – and the MTK – negotiate these epistemic and economic challenges posed by biomedicine and, more generally, modern science?

Ethics

The situation, I suggest, is best conceptualized not as a structural confrontation between modern science and traditional Tibetan medicine, but as a mutual engagement in which each reconfigures the other. In a somewhat different context, Langford treats Ayurveda 'not taxonomically, as a type of medicine, but dialogically, as a strategic sign evoked in political and cultural manoeuvres' (Langford 2002: 11–12). Not only Tibetan medicine, but crucially also Western science can be conceptualized in the same way. As it turns out, this is exactly how Tibetan practitioners in exile strategically turn their disadvantage vis-à-vis Western science into a means not only to assert their own medical knowledge, but also to produce a distinct Tibetan identity for the MTK. Ethics plays a central role in this mainly discursive manoeuvre.

The manoeuvre begins with the proponents of Tibetan medicine assuming an active, rather than a passive, role in their intention to help the world: instead of positioning themselves and their knowledge as (potential) victims of science and modernization, Tibetan doctors in exile made clear that they have something valuable to offer to the world. Thus, in order to make their medicine more acceptable to the West, the very engagement

with science, although recognized as an imposed necessity, is constructed as an ethical practice and a chance to increase the scope of Tibetan medicine globally. In other words, the potential gains of Tibetan medicine's engagement with science are spectacular enough to make science appear as an ambiguous but attractive means to achieve them. Remember, for example, Dr Tsering Jigme's vision of a Tibetan doctor winning the Nobel Prize for medicine in the next twenty years. The following conversation with Dr Phurbu, although more ambivalent and ironic than enthusiastic, further demonstrates this point:

SK: Then why do they [the MTK] do research? I mean, these great *lama* discovered [the medicines], and since then they have worked for so many years, what do you need research for?

TP: Ah, yes. That's because now people need documentation, medical reports. They need paper, that's why! We don't have any doubts about our medicines. And also it's not necessary to create new medicines. We already have them.

SK: So why is documentation needed now?

TP: Because of Western medicine! Even you need this consent form to talk to me! Also when they develop new medicines in the West, then the patient needs to sign that it cured him. Somebody has to write a paper, for proof. So all people are asking for proof. Nowadays, people are very intelligent; they don't say 'Great *lama*!' [makes a gesture of folding hands and bowing], they want proof, they want a report! Looking at the report, they say, 'Oh, before hundred-eighty, now only one-hundred – very good!' But I don't say that this is only a negative influence that comes from the Western doctors … It's also good …

SK: Why is documentation good today?

TP: Because we need documentation now. We have enough medicines to cure all diseases. But what we don't have is documentation. We need it to present it to the WHO, so they will recognize Tibetan medicine as a great medicine! [laughs]

Science here is portrayed both as a strange epistemology that only believes in what it can see and needs written documents to establish the truth, and as a tool to legitimize Tibetan medicines and knowledge. Summing up the Tibetan standpoint, then, we could say that they see Western science as both cultural essence and neutral technology, effectively ignoring the dichotomy between the classical paradigm of science on the one hand, and its critics – Latour, Visvanathan, etc. – on the other. Although for the *amchi* I interviewed, this perspective was above all pragmatic, I argue that it should be taken seriously as a valuable critique of the more radical opponents of science.

The common line of argument of all contributors to *Science, Hegemony and Violence* (Nandy 1988a) – especially Nandy, Alvarez, Shiva and Visvanathan – is that science is inherently violent, because of the six characteristics outlined above (mechanistic, requiring visibility, artificial, reductionist, capitalist and hegemonic). The only answer to this vividly painted threat to democracy, the environment and ultimately humankind itself, these authors imply, is to completely do away with science, preferably by replacing it with local or indigenous knowledges (cf., Harding 1998). What is noteworthy here is that the argument reproduces the same notions of logocentrism, reductionism, vivisection and triage based on obsolescence and progress that the same authors rightfully critique. They thus posit a dualistic moral framework reducing reality to the two options of either good or bad. Science, identified through analytic vivisection as violent, is shown as bad, which therefore moves the authors to call for its replacement in the name of (an alternatively defined) progress. Simply put, Nandy et al. use science's strategies, as described by them, against science itself, thus leaving us with two possible conclusions: either the violence of science is so subtle that there is no hope of escaping it, or it might be put to good use, in which case it is not purely evil after all. The Tibetans show us that universal moral positions of good and evil are an academic luxury they cannot afford in their situation in exile, and that furthermore seem to be unsuitable for a productive engagement with the present. The portrayal of science as violent may very well be true, as many *amchi* agree, but dismissing science as evil requires one to ignore not only its pervasiveness in contemporary life, but also its considerable benefits and utility.

On a deeper level, the commonality of the contributors to *Science, Hegemony and Violence* is their reliance, in their interpretation of science, on what Foucault calls 'domination', which they use in contrast to his concept of 'power' (e.g., Foucault 1977 and Foucault 2003a: 229ff). Whereas domination usually takes more or less overtly brutal forms and is marked by a top-down flow of force that can be resisted and challenged from a position outside of it, power, in Foucault's work, is marked by its pervasiveness and subtlety. There is nothing outside the domain of power in this sense, but resistance and subversion are inherent to it. I suggest that world-views and politics which operate on the basis of a universal morality can be seen as based on an assumption of domination, whereas the pragmatism of the *amchi* is based on a recognition that power always creates the possibility of resistance and subversion. Indeed, like their Ayurvedic colleagues in India (Leslie 1976, Langford 2002), MTK *amchi*

creatively use science's own rhetoric and power to compete with it and establish international legitimacy for Tibetan medicine.

Power

For the Tibetans in exile, the fact that science has certain essential qualities does not make it unsuitable as a means for their own ends. Certainly, none of them regarded it – or modernity – as an existential threat to 'traditional' Tibetan medicine. Indeed, the first use that science is put to, in any conversation, is comparative: it serves as a convenient 'other', against which Tibetan medicine can be favourably defined. In this manoeuvre, the very power and predominance of biomedicine and science are subversively reinterpreted to emphasize the uniqueness of Tibetan medicine, as this conversation with Dr Phurbu shows:

> SK: How are these Western scientists comparable to the great *lama* then? Both find out a reason for why the plants can cure people.
>
> TP: In Tibetan medical texts it says that a certain fish – shellfish? – will cure a certain kind of cancer. These texts were written in the eighth century. They knew by the power of *yéshé* [Tib. knowledge, wisdom, awareness]. But at that time, there was no modern science. Now, Western science comes to the same conclusions! Or for example amla, you know amla? Tibetan medicine says it helps diabetic patients. Now, Western nutritionists also say that amla has the power to activate the pancreas, which produces insulin. In Tibetan medicine, amla has the potency of coarseness. Diabetes is caused by fatty foods and too much sugar. The potency of sugar is smoothness. So we say that coarseness is the opposite of smoothness, so amla helps in diabetes.
>
> SK: So both say the same thing. Does that mean that scientists have *yéshé*?
>
> TP: No, no! But they do research. That's why they spend so much money on finding these small-small … you know … So many machines are necessary for that. But the great *lama* don't need machines.

Similarly, Dr Thinley told me:

> Before, in Tibetan medicine there were no microscopes, but the great masters found out just like that. It's amazing, unbelievable. They told exactly which powers the plants have, without any instrument. Now in the West, they make many new medicines, they are very intelligent, but it's different. They have so much support from machines … they do research, which plant is good for blood pressure, which one for diabetes. But the Tibetan masters knew much earlier.

The large funds and high-tech machines that Western science uses not just to conduct experiments and generate truth, but also to argue its own superiority, are here transformed into signs of actual inferiority. Western scientists are completely dependent on expensive instruments, the argument goes, without which they could not do much. Tibetan medicine, on the other hand, reached the same conclusions centuries ago without any such fancy gadgetry. As Dr Tsering remarked, 'Many people think that science is linked to modern technology. As if without electricity, science is not working!' So how did the old Tibetan masters know the truth, without electricity, machines and money? The answer is *yéshé*, as Dr Phurbu specified: 'In Tibet, there were great doctors, who had special powers to discover … *yéshé*, it's a special power of mind. After meditation, they get this *yéshé*, and from that they know. These were great *lama*.'

According to these doctors, *yéshé* is the source of Tibetan medical knowledge, and can be acquired only through rigorous ethical discipline, such as following the Tibetan Buddhist precepts, practicing meditation, and cultivating an altruistic mind. Indeed, for the Tibetans in exile I talked to, ethics and knowledge are inherently bound up with each other.[7] It is no surprise, then, that the *amchi* always ended up reducing the differences between modern science and Tibetan medicine – and generally between things Tibetan and non-Tibetan – to ethics, all the more so since they clearly regarded the ethics of Tibetan medicine as superior to that of Western science.

This link between ethics and knowledge also underlies the second use (so far more discursive than carried out in practice)[8] that Tibetan practitioners in exile assign to science. Here, science is regarded as a practical means to prove the efficacy of Tibetan pharmaceuticals and knowledge and thereby legitimize them in a global context. By scientifically proving the efficacy of a drug that has been discovered through *yéshé*, one legitimates, in the eyes of the Tibetans, not only the drug but also *yéshé* itself and thus the ethics that is linked to it. It is certainly not the case that the ethics of science (logocentrism, vivisection, objectivity, reductionism, etc.) clashes with the ethics of Tibetan medicine (portrayed as almost the exact opposite by the *amchi*), the powerful former violating the indigenous latter. Rather, they end up engaging each other in a mutual relationship where, contrary as they are, both ethics can be said to define, produce and necessitate each other. Without science, *yéshé* and the whole domain of Tibetan ethics might simply be dismissed by non-Tibetans as belief. With science, on the other hand, the validity of *yéshé* and Tibetan ethics can potentially be proved and legitimated on the global stage. In return, the

Tibetans who use the language of science to achieve their goals reconfirm science's status as the global authority on matters of truth.

Magic

There is yet another interesting aspect to the portrayal of Tibetan ethics in opposition to scientific ethics, namely when one shifts from the Tibetan perspective to that of science. As mentioned above, the opposite of science and truth is normally defined as belief. However, if this 'belief' turns out to be more efficient than simple explanations of placebo can account for, especially when it concerns non-Western practices, another term is given: magic. Does this make Tibetan medicine, based on *yéshé* and an ethics emphasizing the power of pure intentions, meditation and *mantra*, susceptible to being defined as magic? Indeed, this was a concern of Jigme Tsarong: 'That's also the problem with our medicine: People want to make it magical. But it's *not* Tantric, it's *not* magical! People only make it that way. Of course, if you say *mantra* and empower medicines, that works too. But that's a different thing; you can't prove that with science.'

What is interesting in this statement is its ambiguity: Tibetan medicine's scientific nature is invoked in the same breath as the medical power of *mantra*, only to be immediately declared as fundamentally different. This difference between science and magic has been questioned by a number of authors, who have pointed out that science, beneath its guise of objectivity and disinterestedness, functions exactly like magic. According to Lévi-Strauss (1963a, 1963b) and Taussig (1987), the defining characteristic of magic is its openly stated aim of manipulating reality, in contrast to the opposite aim of science, which is to discover truth by simply 'representing' reality without any interference. However, as many have shown, including Latour (1993), Martin (1990), Haraway (1992) or Good (1994), science manipulates reality through poetics, politics, social performance and the power of symbols and language, just like magic does. Langford's statement quoted above, that science's most dazzling show – one could say its 'magic trick' – is its illusion of objectivity, poignantly sums up these authors' arguments. If science and magic essentially do the same thing, their very existence depends on their self-representations in opposition to each other. In other words, science creates magic as its 'other' and its existential *raison d'être*, just as magic depends on science to have any meaning itself (cf., Langford 2002).

Although magic is a problematic substitute for ethics, even if their relationship with science is the same, it is important to consider such a substitution in this context. For if it is true that by engaging with science, Tibetan medicine produces its own 'magic' for all the world to see – the legitimation of *yéshé*, and the counter-scientific identity of Tibetan medicine produced through discourse – then this is neither an accident nor necessarily a cause for concern. In fact, following Adams (2002, cf., Langford 2002), to appear as simultaneously rational and magical is to the advantage of Tibetan medicine, in that it must be scientific but at the same time satisfy Western Orientalist desires. The stakes are high in this manoeuvre, and the outcomes potentially ambiguous, as Langford's (2002) ethnography of Ayurvedic 'quacks' shows: cleverly navigating the space between science and magic, these 'quack' practitioners are at the same time highly successful and highly controversial. As we have seen, Tibetan doctors in exile claim that they desire neither controversy nor profits for profits' sake; their rhetorical claim is to help the world. If they manage to position Tibetan medicine not in the dangerous space between science and magic, belonging to neither, but in both spaces simultaneously, achieving a double legitimation, then the global expansion necessary to reach this goal of helping the world becomes a much easier task.

Knowledge and Intention

This leads us back from an outsider's fascination with magic to the Tibetan preoccupation with ethics. We have seen that not only knowledge, as epitomized by the concept of *yéshé*, but also the very essence of being Tibetan is inherently linked with an ethics of altruism (*kündön, phensem*) and compassion (*nyingjé*). In the context of the MTK, this link is expressed in statements like the following:

> 'An *amchi*'s main quality is love and compassion.' (Dr Tsering)
> 'We don't have the MTK to make money … We're here to help people.' (Dr Tsering Jigme)
> 'Biomedicine isn't like this, the pharma-companies are only making medicines to make money, not to help people.' (Jigme Tsarong)

Such discourses fit in directly with the Tibetan doctors' engagement with science described above, in that they locate Tibetan identity in a certain ethics that can be contrasted to well-known critiques of big pharmaceutical

companies, modern science and the West at large. However, this strategy not only asserts the value of Tibetan medicine vis-à-vis science by switching registers from technical sophistication to moral goodness, it also shifts Tibetan identity in exile from substance (what Tibetans do) to form, that is, how Tibetans act. After all, Tibetan medicine is a very profitable business today, as is biomedicine; the difference, according to *amchi*, lies therefore not in profit-making per se, but in how – that is, with what intention (greed vs. the wish to be able to help more people) – the profits are made. Thus, as the discourses around *yéshé* show, being Tibetan (at least in the context of practicing Tibetan medicine) becomes primarily linked not only with a certain kind of knowledge but also distinct intention (*gongpa*). In other words, knowledge and intention (that is, altruism) are both necessary in order to be ethical in a Buddhist way, and as such, they are both necessary for the MTK's Tibetan identity. The following juxtaposition of a passage on altruism from the *Gyüshi* – the classical theoretical foundation of Tibetan medicine – and Dr Tsering's comment on the ethical difference between Tibetan and Western medicine serves to highlight how the classical Buddhist connection between a certain truth and a particular kind of altruism is today used to define what makes Tibetan medicine specifically Tibetan.

> Altruism entails having an altruistic mind of Enlightenment … [S]eeing [that the three realms are in the nature of] suffering, [having the wish to] benefit [sentient beings and having sincere] faith [in the Triple Gem], rather than cling [to notions of] love and hatred [towards others] as being good or bad, by means of even-mindedness [one comes to abide in the four limitless attitudes of] compassion, love, joy, and equanimity … [O]ne should thoroughly examine [the application of therapeutics and treat the patients] without prejudice. By having such an attitude the patients will become easier to treat, many will recover and become one's friends. (Clark 1995: 224; brackets in original except for capital letters)

> The goal [of Western and Tibetan medicine] is the same, to help patients, but the principles are different. There's the ethical side: We say there's no disease, it's all ignorance.[9] Western doctors say, there is disease, and it's dangerous, I might catch it myself … So there is a wide gap between the doctor and the patients. Almost as if they aren't the same human beings! The doctors wear masks, gloves etc., they don't want to touch the patients. That makes the patients feel bad, they think they have something dangerous. But we Tibetan doctors, we touch, we feel, we are the same. That makes the patients happier. (Dr Tsering)

Thus, although ethics manifests as intentions, it implies a certain knowledge. In this case, the Tibetan doctors' knowledge that disease does not have an independent existence but is the product of ignorance (both in terms of aetiology and epistemology) serves to humanize the patient – for ignorance is the general human condition according to Buddhism – and to reduce the doctor's fear of contagion. This not only helps the doctor to generate good intentions but also determines his or her clinical practice and consequently affects the patient's well-being. Knowledge, in this understanding, is not only a result of ethical practice, as described above in the case of *yéshé*, but it is also its precondition. Dr Phurbu explained this as follows: 'If one has knowledge [through *yéshé*], then one acts in the right way. Before having this knowledge, it's not possible to know what's right or wrong.' Hence, as long as the knowledge is right, the intention will be good and the resulting action will be beneficial – and 'Tibetan'. The redefinition of Tibetanness as an ethical practice constituted of these three factors (knowledge, intention and action), which I have witnessed repeatedly in the Tibetan exile, provides the MTK with an identity flexible enough to adapt to the multiple requirements of exile and modernity. However, as Tibetan culture is redefined as a particular ethics, the MTK needs to prove both the underlying knowledge and the intentions in practice. This is where we return to science.

Regarding knowledge, I have argued in this chapter that the importance of modern science in the *amchi* discourse, and the ways in which they engage with it, can be explained by the potential of science to prove and legitimize Tibetan medical knowledge, and hence Tibetan ethics. Here, the answer to how the MTK 'preserves' Tibetan culture, and what this 'Tibetan culture' is supposed to be, emerges. I have shown how, in its discursive engagement with science, the MTK produces a particular sense of Tibetanness, which has an ethics of altruism and compassion at its core. Carried out in practice, this engagement with science potentially validates this definition of Tibetan culture as simultaneously magical/oriental and modern/scientific, and therefore globally acceptable by proving the knowledge it is based on. As Tibetan medicine is internationally legitimized, and the reach of Tibetan altruism can flow unimpeded across borders, the intention of 'helping the world' can be pursued. Having been conceptually established, this intention – the other aspect of the MTK's definition of Tibetan culture – now also has to be proved, both to the Tibetan community and to the world.

As many of the statements quoted above indicate, the MTK demonstrates its altruistic intentions by strongly emphasizing and

publicizing its official status as a charitable organization rather than a business. Hence, while no information about the institute's considerable yearly profits is available, figures about the worth of free medicines given to the old, the poor and the monastic population, as well as the MTK's annual donations to the Tibetan government in exile, abound. Indeed, free medical camps are regularly organized all over India, and delegations of doctors providing free consultations and treatment anywhere from Kazakhstan to Kenya travel the globe. 'Helping the world' has its benefits, which the MTK is keenly aware of. On one hand, its explicit function is to garner international awareness and support for the Tibetan cause vis-à-vis China, the central issue of which is cultural survival. On the other hand, the MTK's free medicines strengthen its dominant position in the exile Tibetan health care sector both by raising its prestige and by undermining potential competitors in the field of Tibetan medicine, who cannot afford the altruism of giving away their medicines for free or sending their doctors around the world.

Thus, the relation between the care for others and the care for the self becomes apparent: as far as the MTK is concerned, altruism and survival are not merely linked, but are two sides of the same coin. This means that one cannot think of them in terms of a means-end relationship, where, for example, altruism would be the means for survival, or – to use the opposite rhetoric sometimes employed by official exile-Tibetan propaganda – survival figures as the means for altruism. The fact that the MTK's altruism also serves the exile-Tibetans' political interests does not make it less genuine or authentic, nor are its policies and strategies somehow morally superior to others, just because they work under a register of altruism. In short, by propagating a certain ethics as 'Tibetan culture', the MTK is involved not merely in carefully planned image politics, but also in the production of the modern Tibetan subject. It is true, as for example Lopez (1998), Huber (2001), or Adams (1996) argue, that the Tibetans are well aware of the advantages of living up to Western Orientalist expectations of saintly and mystical Buddhists. However, rather than interpreting this as mere 'self-marketing' (Huber 2001: 367) behind which the 'real' Tibetans hide, I suggest that the MTK's strategies described above are directed at Tibetans in exile at least as much as at outsiders. Their twin aspirations of survival and altruism therefore entail a manipulation of others and self, or in other words, a reshaping of Tibetan subjectivity through interactions with others.

Conclusion

I began this chapter by identifying three questions: how does the MTK preserve Tibetan culture; what counts as Tibetan culture in the first place; and what does altruism have to do with survival? I argued that the MTK, in trying to preserve its own Tibetan identity in the face of its rapid modernization, is involved in an active redefinition – or indeed production – of Tibetanness suitable for multiple diasporic contexts and inevitable socio-economic change. This redefinition has as its most important target not the West (though the West serves as the important 'other'), but primarily the exile-Tibetans themselves, who struggle to find ways of maintaining a distinct Tibetan identity in the absence of traditional markers such as territory, dress or customs. The ethnographic material presented above suggests that the 'Tibetan culture' propagated and enacted by the MTK is centred on an ethics of altruism and compassion and is part of the global politics of the Tibetan government in exile. This ethics is characterized by specific knowledge and specific intentions. I have shown at length how this ethics – and in particular the knowledge constitutive of it – is defined, legitimated and enacted through the MTK's engagement with modern science. This engagement is discursive and, to a limited extent, practical. In the practitioners' rhetoric, science serves as a convenient cultural 'other', that is, its cultural specificity is emphasized while its claims to universality and objectivity are denied. While Tibetan culture is thus shown as valuable through discursive contrast, in practice the MTK hopes to make use of science's universalistic claims in order to prove, legitimize and expand the scope of its knowledge. In this way, science becomes a means to produce – or, in the MTK's parlance, 'preserve' – Tibetan culture, which is presented as synonymous with an ethics based on Tibetan knowledge. The realization of the other constitutive parts of this ethics – intention and action – is contingent on the success of the MTK's engagement with science. Only in as far as Tibetan medicine is legitimized and accepted globally can it actually 'help the world'. Helping the world, finally, has as much to do with Tibetan cultural survival as with altruism, and the MTK is well aware of its financial, political and social benefits. Altruism is therefore not simply a means for survival. Rather, their combination is the constitutive modality of the ethical practice that, in great part, forms the modern exile –Tibetan subject.

In his later work, Foucault defined ethics as the care for the self and others (2000: 287ff). He called these techniques, which were aimed at self-

formation through the interaction with others, 'techniques [or technologies] of living' (2003: 108). We have seen that Tibetan medicine in exile is a technology of life in more than one sense: it is capable of saving or improving biological life in case of sickness; and it also preserves culture by producing an ideal, modern Tibetan subjectivity. Ethics, understood as techniques of living, thus emerges as a useful conceptual tool to study the role of Tibetan medicine in exile in a way that avoids both naïve Orientalist idealizations and cynical critiques of Tibetan exile politics. It is the same tool that the MTK uses to combine survival and altruism in the difficult situation in exile, where the Socratic question that ethics pertains to – 'How should one live?' – acquires particular importance.

Notes

1. I would like to thank Sienna Craig, Barbara Gerke, Vincanne Adams, Scott Stonington, China Scherz, and the participants of the panel on Tibetan medicine of the 2006 IATS conference in Bonn for their helpful comments. Special thanks are also due to Gay Becker, posthumously, for her outstanding encouragement at a crucial time of this project.
2. This chapter discusses preliminary findings of my doctoral research from 2005 to 2009. It is based on three months of fieldwork in Dharamsala, Kalimpong, Darjeeling, Gangtok and Delhi during summer 2005, with only minor updates made in 2010.
3. This is the official date of the MTK's re-establishment given today (www.men-tsee-khang.org). In fact, the date refers to Dr Yeshi Donden setting up a small clinic, which later was to become the MTK. Dr Donden himself cites 1965 as the founding date of the MTK (personal communication 2006).
4. For a more detailed rendering of Yeshi Donden's narrative about the MTK's re-establishment in India, see Avedon (1997: 153ff).
5. Amla (Indian gooseberry) is a fruit widely used in Tibetan medicine and Ayurveda.
6. The diagnosis of wind disorder refers to the wind humour (*lung*), and is usually applied to emotional or psychological symptoms.
7. This is in contrast to most accounts of modernity, which posit a rupture between ethics and knowledge. Foucault (2003b: 124) observed that until the seventeenth century, one had to be virtuous in order to know the truth, much as the Tibetan practitioners emphasize today. With modernity, however, the 'ethical subject' was severed from the 'truth-seeking subject' (Rabinow 1996: 137), so that one could be immoral and still know the truth.
8. In exile, only the MTK has sufficient human and financial resources to conduct clinical trials, health surveys, observational studies and modern quality control.

Nevertheless, even the MTK's engagement with modern science is of very limited scope, due to a number of reasons that include a lack of sufficient funds, lack of scientific expertise, and a conservative attitude toward research.

9. Tibetan medical theory holds ignorance – of the true nature of the self and the world – as the root cause of all disease.

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Chapter 5

A Tibetan Way of Science: Revisioning Biomedicine as Tibetan Practice

Vincanne Adams, Renchen Dhondup and Phuoc V. Le

In a world where the visible and tangible rewards of a surgically-based, antibiotically-driven 'Western scientific' medicine or 'biomedicine' always seem to supplant indigenous methods of healing, it is important to remember that moments of encounter always work in both directions. Many have noted the intrinsically integrative and syncretic character of Tibetan medicine, dating back to its inception (Meyer 1992, Dummer 1988, Clark 1995) and, as others have noted (McKay and Saxer, in this volume), encounters between Tibetan medicine and biomedicine and/or modern science date back at least a hundred years.[1] Tibetan medicine today contains elements that reflect these encounters. Nevertheless, the last thirty years have witnessed a rapid pace of interaction with what we might call modern biomedical science, resulting in what appears to be a heightened sense among Tibetan practitioners that they must distinguish their own medicine from biomedicine in its various forms – a process that some recognize as distinctly modern in and of itself (Anderson 1983, Farquhar 1994, Langford 2002).

Tibetan medical practitioners are encountering biomedicine in new ways today, and in this encounter they are forced to think about what makes their own theories, practices, therapies and knowledge different from the biomedicine found in the hospitals, laboratories, pharmaceutical factories and research institutes operating in their midst. Studies of the ways in which indigenous Tibetan medical systems are made to accommodate Western scientific medical models are plentiful,[2] and as in these works, Tibetan scholars, doctors, educators and patients alike speak of their fears that traditional medicine will be made invisible and effaced by the rising tide of biomedical resources (Adams and Li 2008). Indeed, while numerous scholars have explored the ways in which these encounters infringe upon,

transform and sometimes threaten to displace Tibetan medicine (Janes 1995, Adams 2007, Pordié 2008), we explore here the reverse. In this chapter, we illustrate how, in various subtle and yet commanding ways, practices of biomedicine are being refashioned and revised in order to accommodate and even serve Tibetan medicine.

Our research was carried out in eastern Tibet, in the capital of Qinghai Province, Xining.[3] In Xining, we worked at the Arura (Jinke) Medical Group (Jinke is the Chinese rendering of Arura). This is a private corporation that was founded by a Tibetan physician, known as 'Dr Ai'. Dr Ai was trained as a biomedical physician but, because he is committed to the revitalization and modernization of Tibetan medicine, has invested great time, administrative support, political lobbying and funds to build the Arura Group. Some have likened Dr Ai to great scholars of Tibetan medicine's past who undertook institution building or other programmes to help Tibetan medicine flourish, including Desi Sangyä Gyatso, who in the seventeenth century commissioned the painting of the medical thangkas, and Khyenrab Norbu who in the twentieth century founded the Mentsikhang in Lhasa. Dr Ai is committed to revitalizing, modernizing and ensuring the survival of traditional Tibetan medicine by way of modernization. In order to do so, the various branches of the Arura Group focus on and have built a large and successful pharmaceutical factory. Proceeds from the sale of Tibetan medicines help to subsidize a hospital (which has a brand new wing resembling a small Potala Palace and an old wing devoted primarily to Tibetan medicinal bath therapies), and a College of Tibetan Medicine that is housed within Qinghai Normal University as a branch of the regular medical college. The Arura Group also supports a research institute, discussed later in this chapter, and a museum for Tibetan Medicine. Wherever Tibetan medicine exists in Xining, one can see evidence of the presence and influence of biomedicine. Indeed, using biomedical techniques of research, Western medicines, diagnostic technologies, and theories of disease and anatomy is commonplace there (whether in the hospital, the college or the medical factory), just as it is in other urban Tibetan centres such as Lhasa and Dharamsala. Nevertheless, we explore here those encounters that show the two-way flow of translation such that in the end it appears that biomedicine is frequently put in service to Tibetan medicine in ways that do not compromise Tibetan medical theory or practice.

These subtle revisions of Western scientific medical practice might be thought of not simply as a form of appropriating Western techniques, as if

they could then be seen as somehow divorced from the larger system of medicine and used *sui generis*, the way that we often note Tibetan medicine is appropriated in biomedical research programmes. Rather, we suggest that these appropriations point to the ways in which medical systems are porous and mutually permeating. Just as we have seen that Tibetan medicine 'modernizes' itself by incorporating Western biomedical techniques, medicines and terminologies, so we could say that these appropriations could be read as ways in which Western 'science' is made 'Tibetan'.

Key Translations and Appropriations

The encounters we focus on in this part of the chapter happen primarily at the Tibetan Medical Hospital and at the Arura Research Institute in Xining. We note at the outset that there are tensions in the way in which 'translation' occurs between the medical 'systems'. In particular, some people believe it is possible to use biomedical techniques in order to establish the validity and efficacy of Tibetan medicine, while others believe that using biomedical techniques will undermine the validity and integrity of Tibetan medicine. Here, we are interested not in the perceptions and fears about changes, but in the actual practices of integration that suggest multidirectional paths of change and accommodation. We begin this journey in the halls of clinical practice of Tibetan medicine.

The Hospital

The Tibetan Medical Hospital in Xining is a very large and forbidding building. Since 2005, a new hospital is located atop the northern hills of the city, casting quite a large shadow over the smaller three-storey in-patient and out-patient clinic sitting below the new hospital driveway that used to be Xining's primary Tibetan medical hospital. There are other differences: the new hospital resembles a small Potala, with Tibetan architectural features, such as sloped walls, woodwork trim coloured saffron and burgundy that resembles monastic institutions, and a long sloped slate stone walkway that looks as if it were actually taken from the front entrance to the Potala. The older hospital, which now serves as the out-patient clinic and pharmacy as well as an in-patient ward for medicinal baths, looks very different. Built in the institutional cinder block architecture of China's 1970s modernism, it hardly looks like a clinic. Without the steady stream of Tibetan patients being helped in by family members or exiting with patches on their eyes and arms, moving slowly with bags of fresh medicines, one might not know that this

was anything other than a government-sponsored office. Once inside however, one knows immediately that it is not. The odour of incense and herbal medicines, urine and sickness permeates the front of the building. At the rear are three stories of rooms located around a circular atrium. These are the medicinal baths, smelling of steam and heat and healing, rich unctuous odours of saffron and barks and minerals, with smiling physicians with rosy cheeks, and patients looking equally happy to be in residence in this particular ward (for sometimes up to three or six months!).

Inside the new hospital, the mini-Potala, things are sterile, new and clean, metal and marble, glass windows with arrows telling patients where to check in, and where to pay their bills, where to get their X-rays, where they may go to the bathroom, where to get their medicines and where to wait. Signs on the walls offer guidance as to the hospital's structure: a division for liver and kidney ailments, a division for surgery, a division for paediatrics, a hall for blood work and other laboratory tests, a unit for orthopaedics, or X-rays and so on.

Despite their visual disparity, the two hospitals are one. And they constitute a Tibetan medical hospital, meaning that most of the treatments are Tibetan in origin, most of the diseases dealt with are given Tibetan names and most of the people who use the facilities are Tibetan. Inside both parts of the hospital, however, doctors find it increasingly difficult not to use Western biomedical diagnostic tools in their clinical practices. This includes, when and where they are available, use of blood pressure cuffs, blood laboratory work, ultrasound reports and X-rays. They are also increasingly able to use biomedical pharmaceutical products, not just aspirin and antibiotics but also more specific drugs used for anaesthesia, labour, delivery and so on. Sometimes biomedical names for diseases are used in conjunction with the Tibetan names and other times as stand-alone diagnoses. Most physicians in the Tibetan medical hospital, however, begin with use of Tibetan diagnoses – urine, pulse and questioning. The subsequent business of naming disorders and deciding which diagnostic measures to heed, or not, and which pharmaceutical regimes to follow is tricky at best, and depends on a wide range of factors, such as the background, education and ethnicity of clientele, the resource base of the clinic, and the experience of the physician.

The most common pattern of diagnosis was to use Tibetan diagnostic techniques first in order to determine a Tibetan diagnosis and then use a set of Western diagnostic tools, which sometimes resulted in a shift to the use of a biomedical disease name. We spoke with one lineage-trained Tibetan physician (PL) about what he did:

I (Interviewer): so even without formal training [in biomedicine], do you use any Western medicine in your practice?

PL: I read results from tests, like ultrasound, blood examinations, and most of the examination results I can't read, but they help you explain things like where is the problem, maybe in the gall bladder, maybe the liver, maybe the liver has some functioning problem. It helps to explain that. But blood, I can read it a little bit.

I: How did you learn that?

PL: Not blood laboratory examination, only how to reach and check blood pressure, which I learned by watching other doctors, you know with a stethoscope [and cuff].

I: Do you use the blood pressure in your medical exam?

PL: I check blood pressure often. And sometimes if it is a little complicated, and I cannot measure it, I just ask others to help with examination results, like blood, and others can explain it to me. But the results I just use for reference. I use my own methodology, pulse and urine as the main diagnostic method. I just make note and compare my results with the West diagnostic methods.

I: What does this mean to compare them? To confirm your diagnosis, or to use Western medicine or the Western diagnosis? What is the specific role of the Western medicine diagnostic technique in your practice?

PL: Sometimes, Western medicine diagnostic tools are helpful. They help confirm your Tibetan medicine diagnosis of disease. For example, when I check the pulse of the patient, if I read that it feels like the patient has some stones in the gall bladder, then I let them do the ultrasound for gall bladder and after the results come out, others can help me read and confirm whether there is a stone or not. This is how it helps. The other example is hypertension. When I take pulse from the patient I feel that there are some blood problems, vessel problems. I can feel this from the way the pulse beats – there is a definition for the problem of vessels when it is very high or low or tension – because I suspect this, I recommend that the patient check the blood pressure and this can sometimes confirm that my diagnosis result is the same.

Dr PL's use of biomedical technologies for diagnosis suggests an interesting augmentation of Tibetan techniques of diagnosis with biomedical practice. By using ultrasound and blood tests, he is able to confirm or affirm his own understanding of a patient's imbalance which he diagnoses first through pulse, urine and questioning. As he is not trained in the use of these, he relies on other physicians who have the biomedical expertise he lacks. Still, we wondered what would happen in the event that the biomedical diagnostics contradicted his diagnosis. What if the ultrasound did not confirm gallstones, or the blood pressure cuff hypertension?

I: What if it is a negative result? That is, what if it does not confirm the pulse diagnosis? If you think it is gall bladder stones, but the results on ultrasound are negative, do you still think it is stones or is your diagnosis changed by the ultrasound report?

PL: Ultimately, I believe the ultrasound results. When they say there are stones, I would treat for stones. If it says there are no stones in the ultrasound, I would treat as if there were no stone – maybe some other problem.

I: Colitis?

PL: Yes.

Things get trickier in the case of contradictory diagnostic results, and suddenly Dr PL shifts to a biomedical diagnosis when it appears his own diagnosis is not correct, agreeing with our biomedical suggestion that it might be 'colitis'. However, his response did not indicate an abandonment of his own diagnosis, so much as a refining of it, so that he could treat the patient's imbalances with a different approach – one for a patient who did not have gallstones. He continued to explain how he would not necessarily always believe the biomedical diagnostics.

I: How about blood pressure, for example? If you suspect high pressure from pulse, but the cuff shows normal pressure, how does that change your own diagnosis?

PL: My experience is that if I check these patients through pulse and there are blood problems indicated in pulse, consistent with Tibetan medical theory, and it is different from the blood pressure Western test, then I would check more comprehensively for this patient. He might have some 'hot' problems and usually I would follow only the Tibetan medical diagnosis, I would not trust the blood pressure Western test in this case.

I: Are some [biomedical] techniques more convincing than others? For example, are ultrasound results followed, but not blood pressure results?

PL: Yes.

I: Do you think both methods are equally good, in terms of results? Or do you think in all your experience it is just as good if you only use Tibetan methods?

PL: I have never researched this. But if you use pure Tibetan medical diagnosis and compare it with Western medicine, it seems that both are effective. In my experience, both can be effective. So it is the same. But it is good sometimes if you combine Western medical diagnostics to confirm the diagnosis and development of disease at different stages. For example, the first time you diagnose this in Western medicine, and then a few months you can take tests and see the progress of treatment, to see if it is visible. This is the advantage of combining Western diagnostic tools. But we can only do this in the city. But what about the grasslands, nomadic area? There is no electricity. No

> ultrasound. No CT scan, no blood examinations. We cannot lose the precious Tibetan medical diagnosis, pulse diagnosis and urine and questioning, we cannot lose this and especially in our Tibetan society, we cannot lose this.

Dr PL offered a good example of the cross flow of diagnostic reasoning and practice, in which Tibetan and Western approaches were used in tandem. He also reminds us that for the purposes of treating the populations that most use his medicine, it is important to be able to rely solely on Tibetan methodologies, since other modern technologies are unavailable, even if they can help with diagnosis and treatment using Tibetan conceptual categories.

Dr PL's practices were similar to those of most of the physicians we observed and spoke with at the Tibetan hospital. Of interest to us in his account is not that in some cases the diagnostic instruments of biomedicine led him not to trust his own diagnostic techniques, but rather that this was not always the case. In fact, the reverse was just as likely to occur. So when blood pressure results did not confirm his own pulse diagnosis, he was more likely to trust his own diagnostic methods than the Western methods. With ultrasound results, it sometimes went the other way. In most cases, he felt that the utility of biomedical diagnostic instruments was in their ability to confirm or elucidate Tibetan diagnoses. In the end, he felt that the two diagnostic techniques were equally valid, but of great interest is how biomedical techniques become absorbed in the task of affirming Tibetan medicine. We can see here the first instance of a type of science that has expanded its own boundaries by way of Tibetan medicine.

In some cases, the use of biomedical technologies in Tibetan diagnosis is seen as limited simply because of the differences between the two systems. For example, Dr LT was a physician of Tibetan medicine who received numerous and diverse training from a generation of accomplished pre-Cultural Revolution scholars. He had learned a small amount of biomedicine through training in the techniques of the barefoot doctors, but he felt that he had not learned enough biomedicine to make it useful. Nevertheless, he noted that in his work in the baths division at the Tibetan Hospital, he made use of biomedical diagnoses in order to help Chinese patients who were unfamiliar with Tibetan approaches. He told us that sometimes biomedical tests were not very useful in diagnosing accurately but they were useful for appeasing and instilling confidence in patients who expected that type of medical encounter. This use of biomedicine augmented the reputation of the practitioner without having any real impact on the Tibetan medical diagnosis or treatment:

Dr TS: The common diseases at my outpatient clinic are *drumbu* [commonly translated as rheumatic and rheumatoid arthritis][4] and skin disease. We differentiate six kinds of drumbu disease hot, cold, channel, skeletal-bone, muscle, tendon, but there are also many skin diseases. Tibetan medicinal baths can cure [it] very well. In medicinal baths, we have three types: 'steaming', we have 'dressing' or application and 'immersion' medicinal baths, and we use different ones for different diseases.

I: *Drumbu* is a common disease for your department, so how do you diagnose *drumbu* disease?

TS: I usually diagnose *drumbu* patients, most commonly using the Tibetan method. We have three diagnostic methods: pulse, urine and questions. Usually when patients come to see me, their pulse beat is very tight. I check urine colour and usually the urine is red like tea and even the bubbles quickly disappear. That is the second indicator. Third, I can see the patients' joints. Usually with *drumbu*, this happens on the joint: the joint does not work well and it is swollen in places, it is painful, the patient cannot walk, and sometimes it moves into the joint structure. We can see from that [these symptoms].

But now in this hospital, sometimes [this is what] we have to do in this hospital, we have to use Western methods. For example, we have to recommend [that] they check the blood, for the rheumatoid factor (RF), c-reactive protein (CRP), erythrocyte sedimentation rate (ESR), and the antistreptolysin O and anti-O (ASO). But those are Western medical theory and lab results. The reason why we have to check that is that many of our patients are Chinese and if you just check pulse, urine or questions, they will not be convinced. They don't trust you, so they always ask for lab tests. For me, that is just to convince the patients, but I can't use it in my diagnosis or in my results or treatment. Because in Tibetan medicine, we don't believe that [use that approach]. You know, I met some patients and when you see their symptoms – joints stiff and swollen – and if you check the exams from the lab results, you cannot see those laboratory (RF, anti-O, etc) results, but the patients you can see that they have *drumbu*.

I have sent *drumbu* patients to see Western doctors in the People's Hospital, and I asked Western doctors and discussed with them about these problems, but they cannot explain this. I have asked why this is the case, but they also cannot explain this. I say, you can see the symptoms but when you check with lab test, you cannot see the positive result. They also cannot explain this. So I also don't trust the lab results for *drumbu* disease. But it is for the patients because they ask and they think that you need that.

I: So Dr LT-la, for diagnosis, you say that you use Tibetan medicine but Western medical test diagnostics are just for convincing 'Westernized' patients [that is, Chinese or Tibetans who are familiar with 'Western medicine']. But how do you treat these patients? Do you use both?

TS: As for treatment, as I told you, most patients who come here have already received treatment from Western medicine and Chinese medicine and most patients have already taken medicines, pain relievers, but they have not been cured, and so that is why they came here. So in our medical department, and in my experience, we use only Tibetan medicine. That is my experience. My experience is that in Tibetan medicine you cannot say that this *drumbu* is different from other diseases, you cannot separate out other problems. That is, even if you are in the liver department, you will see all of the patient's problems together. This is Tibetan medicine. Some patients come to my room and say – 'Oh this is for the digestive department', because on the door it says drumbu department, outpatient. Maybe the patient does not understand. But for me, I can see all kinds of patients and I use traditional methods and this means that we see all the relationship between them. I also recommend many other doctors should use pure Tibetan medical diagnostic and treatment methods. This would be very helpful I think.

(nurse comes in to consult … he's been interrupted several times).

Yes, according to my experience, for some kind of diseases it is useful to use some Western diagnostic techniques, like ultrasound and the CT scan. For example, gallbladder stones. If you take pulse you can suspect there is a problem in gallbladder, but you cannot say there is stone from the pulse. So ultrasound is useful and it can tell you if there is a stone or not. For *drumbu* disease, I don't think that Western medical diagnostics like laboratory and blood tests are useful. They are useless.

The interesting ways in which Tibetan physicians negotiate between the use of biomedical and Tibetan technologies and diagnostic techniques are instructive. Sometimes biomedical technologies enable a displacement of Tibetan terminology, diagnosis and interventions (as with gall bladder stones or with 'hepatitis'). Sometimes the opposite occurs, as when doctors must ignore or render irrelevant biomedical laboratory results because they appear to contradict Tibetan diagnoses (as with the blood tests for arthritis). The use of biomedical techniques to augment and reinforce Tibetan practices is common (for example, to confirm diagnoses of imbalanced wind by using biomedical blood pressure tests). However, even when the biomedical techniques are considered somewhat irrelevant medically, they are sometimes seen as serving a symbolic role in conferring a kind of expertise upon the Tibetan practitioners with patients who are more confident in biomedicine.

These negotiations are more than arbitrary encounters. They suggest an underlying willingness to try to make use of the best medical resources available in order to solve thorny medical problems. At the same time, the

negotiations reveal a lot of multidirectional traffic in and around the mixing of medical repertoires and techniques. Our purpose here is both to show this complexity and to suggest that one of the more interesting outcomes is the increasing presence and use of biomedicine within Tibetan medical settings that does not necessarily compromise the Tibetan approach. Let us venture now outside the clinical domain to see in what other ways this traffic flows.

The Pharmaceutical Factory and Research Division

The Arura Group funds a pharmaceutical factory, the proceeds of which go partly towards supporting a research institute (a division of the Arura Group). The research institute is located in a four-storey building behind the old Tibetan Medical Hospital. Its top floor is devoted to data management, and its rooms are lined with computers and library materials. On this floor, research staff are involved in computerizing the data that is generated at the institute, developing website information on the Arura Group, conducting research on other Tibetan medical research publications, and publishing the institute's research results. The lower floors are filled with laboratories and the researchers who work there wear white coats. There are centrifuges, chemicals, petri dishes, test tubes, Bunsen burners and pipettes, as well as large drying machines, spinning and sorting machines, grinding machines, heating and cooling machines and capsule-making machines. There are shelves of ingredients waiting to be tested, and there is, of course, an animal testing section, where rabbits, snakes and mice are kept. Next door to their cages is the testing room where there are mazes, hot-pads and climbing sets designed for testing the reaction time of small animals. They draw blood from these animals in order to test for the presence or absence of active ingredients (in their blood).

One of the interesting dynamics at the pharmaceutical factory is that adopting pre-production, production and packaging methods that meet China's Good Manufacturing Practices standards (based on GMP models used in the United States) has required some compromise in the traditional production methods of Tibetan medicine.[5] For example, efforts to ensure homogeneity of ingredients (a quality control standard) initially led the factory to use the same production methods for all ingredients and medicines, including processes of grinding, boiling (or heating in other ways), emulsifying, and putting medicines into capsule form. However, recognizing that the traditions were very specific about methods of production, the factory has supported efforts to investigate the significance

of such traditional prescriptions. This includes methods of collecting ingredients (and where to collect them), how to store and/or dry them, and how to mix them with other ingredients and deliver then to patients. It also includes an investigation of the role of different ingredients required in the recipes to determine the relative importance of each ingredient – a sort of 'active ingredient' screening technique.

Although research personnel who were trained in Tibetan medicine frequently wondered whether their biomedical laboratory tests might efface certain aspects of Tibetan medical theory (for example theories of the five elements), simply because these considerations were not actually taken up as empirical issues in the research design, they also believed that many of the research projects they undertook would help to show the efficacy and value of traditional Tibetan medical pharmacology and pharmaceuticals. In almost all of the studies, biomedical research techniques were being used to ascertain the effectiveness and potency of Tibetan medicines. Some of these included:

- tests to see whether pre-production drying of herbal ingredients by long-term open-air, closed container, or by heater made a difference in potency;
- tests to see whether formulas that removed certain ingredients but kept those thought to be active had different effectiveness;
- tests to see if different methods of mixing ingredients together made a difference in effectiveness;
- tests to see if capsule forms of delivery were more effective than, or of the same effectiveness as, traditional pill or powder forms of delivery.

In each of these tests, we noted that the research unit used Western scientific research techniques that did not previously exist in the Tibetan repertoire of research techniques. Many of these were debated. For example, the use of animal subjects was said by some researchers to be problematic. The first problem was that it was impossible to take pulse or do urine analysis, and of course questioning, on animal subjects, and so the basic indicators of a medicine's potency, as determined by pulse analysis, was not available to the researchers. Some also worried that the research methods used on these animals was morally problematic – evaluating the medicine's effects on the animals' behaviour by using electrical shock systems, hot plates, mazes and other stimuli-response behaviourist tests that were harmful to the animals, or required killing them.

Others felt that these were not impediments to showing Tibetan medicine's efficacy, and in fact many suggested that they might be able to show how important it was to follow traditional pre-production and production techniques simply because these research results would show effectiveness even using biomedical measures alone. That is, many researchers felt that one could substitute biomedical response measures for those used in traditional medicine as if it were a matter of simple translation. In the sense that these tests were not studying clinical efficacy, but merely biological effects, this assumption of a simple translation is understandable. In other areas, there were other kinds of translations.

In the chemistry laboratory rooms, research involved the use of Western notions of chemistry, biochemical structure, substance names used in Western science, and techniques of isolating substances used in Western biochemistry. That is, research that began with Tibetan names for ingredients – based on a different kind of 'chemistry' derived from the Tibetan principles of tastes, elemental potencies (fire, earth, etc.) qualities (viscosity, unctuousness, etc.), hot and cold qualities – proceeded by relying on a Western repertoire of biochemistry. Tibetan concepts were not 'translated' into biomedical concepts. Rather, biochemical names were ascertained for these ingredients, which were then tested using Western biochemical analysis. For example, if the research was to find out whether boiling ingredients before emulsifying and drying them for capsule delivery systems changed the chemical potency of ingredients, compared to production methods that did not involve boiling, then they would show this through laboratory studies. In the end, however, test results were used to show different qualities – ingredient strength, active ingredients, quantity of each ingredient, etc. – of the original Tibetan recipes. Biomedical techniques were used to validate, or suggest need for modification in, Tibetan pharmaceutical production practices rather than suggesting that ingredients be modified or reduced to just one simple set of active ingredients.

In some tests, biochemical analysis was used to actually study the potencies of ingredients and formulas. If laboratory analysis suggested that the proportions of ingredients were supposed to be specific within certain formularies (for example twenty per cent saffron, or five per cent of a certain root), then biochemical analysis would be able to show that using certain production practices ensured these proportions better than others. Biochemical analyses were also used to ascertain correspondence with 'active ingredients' within Tibetan formularies. The lists of active ingredients were derived from biomedical equivalents, many of which were already designated in China's traditional medical research institutes elsewhere, and

monitored by China's FDA. However, researchers also studied varieties of Tibetan formulary ingredients to determine potencies of single ingredients, and to discover whether potencies were declining or varied depending on the source of harvesting. This specificity of potency follows more of a Tibetan pharmaceutical approach than a biomedical approach, which usually standardizes ingredients by manufacturing them chemically instead of harvesting them. Thus biochemistry was in this context being used to support and render more specific a Tibetan pharmacological method.

Our discussions at the Research Institute often involved dialogue about how to conduct research in ways that used traditional Tibetan methods of research. These discussions tended to focus on ways of evaluating potencies of ingredients, ways of experimenting with medicines, and the challenge of incorporating these into a research protocol that would look scientific from a biomedical perspective because basic measures (taste, viscosity, etc.) were not part of the biomedical repertoire. One researcher explained how different traditional Tibetan methods of research were:

> We have our own tests of the medicines and potency, and own way of research. For example, there is a kind of mineral, like a stone, very hard, white colour, '*junshyi*'. We use that mineral ingredient in Tibetan medicine. We use that, but you cannot just put the stone in. You have to take out the poison. We have our own way of manufacturing this mineral. This mineral is very hard, stone. You have to make it into smaller pieces, grinding and you put [it] in a special pot and then you can only take certain amounts, to certain levels, and then you cook it. We have our own procedures for doing this. Finally, there are three ways to test the minerals after you have cooked it. You have to test [this] in three ways. Is this good or not? Effective or not? You can put it on your tongue, that is one way. Does it make your tongue feel penetrated, in painful way? That is one sign of the medicine to show that the procedure is good. The other way is if you put in boiling water – in water that is boiled, that is the second sign. The third is: if you put it on your skin, does it burn your skin? These three signs are indicators of the potency or quality, safe quality, of the medicine. These are our own methods, the way of Tibetan medical laboratory research, or Tibetan medical tests.

Another Tibetan physician explained traditional Tibetan medical research by noting that there was an historical method involved in discovering drugs and evaluating their efficacy:

> Tibetan classical herbal books show that some medicines are good for cuts and fractures. Those were discovered by way of animals. How do they know? Because

> they learned from the example of the animals. Animals that were hurt, or shot, and they researched how they cured themselves. They ate certain plants, or put some plants on the wound. This is a general rule. Only a few medicines were learned this way, not a lot. This is a traditional kind of research on pharmacology. This is how Tibetan doctors have done research. Then, some doctors research different herbs, where they grow – high, med or low altitude, sunshine slope or shady slope? Then they gradually tried by taste, the flavours, this is sweet, this is bitter, and so on and then they figured out the elemental components. Based on the elements, they can decide what *nyépa* it has or matches, then they can prescribe and match it as an ingredient in a medicine for treatment of imbalances of the three *nyépa*. What I have told you about is the effectiveness of flavours. There is another measure of effectiveness this is what we call 'natural' effectiveness. This kind of effectiveness, ordinary people cannot explain. Only the very high meditation experts can know this, only high *lama*.

When researchers use Western scientific methods of studying potency, including the technologies which enable them to perform animal studies and chemical analysis, they necessarily displace Tibetan techniques to some extent. That is, when borrowed technologies are used, they often entail a sort of substitution rather than a 'translation' of Tibetan concepts. At the same time, this research is taking place in an institute devoted solely to the study of Tibetan medicines, their potency, and to some extent the validity of traditional techniques of production, research and drug delivery. To the extent that results often validate not only drug efficacy, but even the role of pre-production techniques and delivery method in effectiveness, then one could say again that this appropriation of biomedical research technologies works in support of Tibetan medicine. The next step, they claimed, was to develop ways of measuring outcomes objectively but by using pulse, urine, taste, astrological data and other Tibetan indicators as the measures of effectiveness. Such research strategies were already being pursued in research institutes focused on traditional Chinese medicine, and could equally be pursued in Tibetan research institutes.

At the Arura Group, there is active debate over the use of biomedical technologies, from chemical analysis and reductionistic methods of ascertaining and testing for active ingredients, to the idea that animals can show the effectiveness of medicines. When Tibetan doctors were asked if they worried that a focus on active ingredients might lead to a situation in which only those ingredients would then be considered important, we were told that that question also could be studied in this way: one could undertake research to compare the effectiveness of using only active ingredients with the effectiveness of using the full panoply of Tibetan recipe

ingredients in each medicine. If there were only two or three 'active' ingredients in a formulary of eleven or so, then they would test the effects of medicines made only with those ingredients against those made with the entire formulary. Tibetan medicine, we were reminded, believed in subtle combinations of ingredients that attended to a variety of different qualities (hot, cold, earth, fire, water, wind) and so in combination could alter the internal health of patients. Researchers anticipated that the Tibetan formularies would be more effective than the active ingredients alone and were anxious to undertake this research.

When asked if the studies at the Arura Research Institute were putting Tibetan medical theory at risk, most felt that while there were some risk of losing knowledge, the studies could also show Tibetan medicine at its best, by way of outcomes. In the final analysis, Western scientific methods are being used in a variety of ways within Tibetan medical research. This modern form of Tibetan medicine that uses biomedical techniques of research is something that both frightens and arouses hope. It creates tensions among researchers as they awkwardly try to use techniques of research and models of efficacy that, in fact, do not fit well with one another. It must be noted, though, that just as attempts at modernization require Tibetan medicine to 'fit' into research models that are unfamiliar to it, so too is biomedicine being made into and used for something distinctly 'Tibetan' in character.

A Tibetan Way of Science

In the Jinke Pharmaceutical Factory, there are strict government requirements in place for the manufacture of medicines. These pertain to ensuring homogeneity and consistency of ingredients, standardization of dosages and packaging, cleanliness and licensing of drugs by way of the Chinese FDA. The model for manufacture of medicines emerges from the international biomedical model for drug manufacture, used in China as well as in most industrialized countries.

Many rural and urban hospitals, as well as Tibetan physicians practicing on their own throughout the country, continue to make and prescribe medicines in the traditional way, in their own clinics, with ingredients collected by themselves or by way of trade markets, and made on the basis of local recipes. At the large pharmaceutical factories of Tibetan medicine, such as Jinke, there is an interesting romanticism about the ability to integrate Western scientific production techniques with techniques like those of traditional practitioners in

rural areas throughout Tibet. Attempting to produce medicines for a mass market leads to a need for streamlined production methods. These new production methods, in turn, can ironically make medicines produced by more traditional methods seem all the more potent, by comparison. For example, we noted that a frequently voiced concern of scholars and professionals at the Pharmaceutical Factory was that the quality of ingredients may already be compromised by the fact that they are having to cash crop them, or because they have to mix, heat and emulsify ingredients in ways that compromise the inherent 'hot' or 'cold' qualities of the ingredients. Sienna Craig has extensively documented these phenomena for the Tibetan Autonomous Region of China (Craig 2006, 2007). It is precisely this discourse about 'loss' that sets the agenda for research at the Jinhe Institute. And therefore it is the attempt to conform to biomedical standards that in some senses provokes an active effort to sustain, investigate and valorize traditional methods.

Even more striking are the examples of efforts to sustain traditional methods within the context of modernizing trends. For example, we asked what happened when certain ingredients that were required in traditional formulas were no longer available, or were difficult to locate. We were told that, following traditional norms, they would either find a suitable substitute ingredient [on the basis of taste?] or they would simply write the name of the ingredient on paper and burn this paper, adding the ashes as a substitute for the ingredient. This Tantric practice or 'actualization' of the ingredient by way of 'materializing' it on paper appears to be quite magical to modern Western scientific sensibilities, but is considered reasonable and practical to many Tibetans. It is no different from the practice of writing sacred words on paper to invoke protection from various deities and wearing an amulet containing the paper around one's neck, and assuming that the words actually convey in some way the power of the deities themselves.

One could read this practice as an example of a vestige of a past Tibet that is held over in a modern world, where pharmaceuticals are known only by their tangible and scientifically measurable biochemical qualities. But we suggest that we can also read this as an example of how a certain traditional logic prevails, and that contemporary, scientific techniques are being fit into this larger logical system. Other examples of this could be seen at the hospital where, despite the massive presence of scientific biomedical technologies, one could still find ritual practices being carried out by *lama* at patients' bedside. One could also find doctors who used these ritual and somewhat 'religious' techniques (burning incense and writing amulet prescriptions), and who advised consultations with *lama*.

There is a kind of traditional efficacy and potency at work in these practices that proceed from traditional Tibetan notions of disease and therapy. When understood as part of a system of Tibetan medicine, these biomedical accretions form part of the corpus of Tibetan medicine, rather than the other way around.

Tibetan medicine emerges from a tradition that could be characterized by modern 'scientific' thinkers as a combination of 'religious' and 'empirical' thought and practice. Whether one considers the theories of rebirth that explain how the quality of one's visceral energies (*nyépa*) are determined by *karmic* action from past lives, or whether one considers the role played by the emotions in the health of the individual, wherein the emotions are characterized as 'poisons' in a moral, religious sense, one can see that Tibetan medicine is infused with a good deal of religion in its basic theoretical foundations and this is the basis of Tibetan medicine. As one physician noted:

> I don't know much about Western medicine, but these two are different. Of course they have different research approaches. But generally, I think that Tibetan medicine, everything regarding drugs in the body, it depends on the five elements, everything consists of the five elements. How do the five elements outside become five elements inside? But Western medicine, they just focus on the outer elements, they maybe focus more deeply on or dividing those elements, but they are more focused on these things. They only believe in the visible things, not the invisible. But we believe in the invisible things. The outer elements become inner elements. There are some changes we cannot see, they are invisible… If you are going to become a Tibetan doctor, you have to learn astrology and you have to integrate astrology and Tibetan medicine. Integrate it and you can practice both in an integrated way, then you are really a Tibetan doctor. We say you have two eyes, a pair of eyes. If you lost one then you cannot see the whole. Religion, of course, is connected to the psychological part. In Tibetan medical theory we believe the body is composed not only of matter but also spirit. We believe that, that the body is composed of those two things. So even if you diagnose or treat patients, the psychology is very important. This is connected with religion.

Tibetan medicine comprehends the relationship between the elements (the five elements that make up the universe) and the *nyépa* in the same moral ways, relating visceral action (blood pressure) to the elemental qualities of fire that come from certain foods, climate change, other environmental conditions and, most important, feelings of anger and agitation. Religion in

Tibetan medicine might easily be seen as epistemological in the sense that religious theories are present in all of its aspects, from pharmaceutical notions to clinical and research orientations. It forms a cosmology that underlies all aspects of the medical system.

Although confronted with the tools and methods of biomedicine, Tibetan medical practitioners are quick to note how different their medicine is from biomedicine because of its 'religious' aspect. Despite this distinction, however, researchers and clinicians in Tibetan medicine are finding ways to incorporate biomedical techniques, knowledge and research methods into their work without entirely losing their foundational theories or practices. In the end, these practices meet up with Tibetan ideas in ways that are sometimes contested and other times accommodated and incorporated but in ways that do not necessarily efface 'religiously-based' cosmological ideas.

It takes a little more imagination to understand how one might view the practices of Western science that find their way into Tibetan medicine as a 'Tibetan' way of science. Biomedical science is sometimes made to serve Tibetan medical theory and practice. This expansion of Tibetan medicine is also an expansion of modern biomedical sciences and both involve more than simple transfers of technologies. In the cross traffic of integration between the two systems, it is possible to see how Tibetan medicine might constitute a space where Western science is globalized and at the same time becomes redefined as a practice of Tibetan medicine.

Notes

1. Still, Western missionary accounts need to be evaluated in this light and might uncover even earlier encounters between these two medical systems.
2. See, for example, Farquhar 1987, Leslie 1976, Leslie and Young 1992, Hsu 1999 and to some extent Scheid 2002.
3. We acknowledge and appreciate that this research was funded by the National Science Foundation, award number: SES 0522872, IRB approval H10920–26462, UCSF.
4. For a more detailed description of this disease, see Frances Garrett's Tibetan medicine glossary at www.thdl.org.
5. The GMP emphasizes standardizing ingredients (ensuring the exact proportions as called for in recipes), homogenizing them (mixing to ensure standard proportions in each pill), ensuring equivalent ingredient proportions, sanitization, and mixing procedures that are uniform. Since 1993, China's health ministry has required that the 'minority medicine' (medical systems recognized as emerging

from China's officially recognized and named minority populations or *minzu*, such as Tibetans) would need lists of standardized criteria for their raw ingredients. After two years of review among Tibetan experts, a standard list of Tibetan medicines and raw ingredients was created, which is now used by all Tibetan hospitals and pharmaceutical factories in China. The list includes around 136 raw materials (mineral, herbal and animal substances) and 200 medicines (compounded ingredients). All production of Tibetan medicines for the market has to conform to these criteria in order to be legal.

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Chapter 6

Correlating Biomedical and Tibetan Medical Terms in *Amchi* Medical Practice

Barbara Gerke

Introduction

This chapter discusses the process of how classical Tibetan medical terms acquire new meanings, especially when practitioners of 'Tibetan medicine' in both the Tibet Autonomous Region (TAR) and Indian exile[1] are exposed to ideas about biomedicine. The ethnographic examples presented are based on doctoral fieldwork (2004–2006) carried out among Dharamsala Men-Tsee-Khang trained Tibetan doctors working in the Darjeeling Hills, India. In the second part of this chapter I give the example of two biomedical terms, 'oxygen' and 'haemoglobin', and analyse how they are used and interpreted in the Tibetan clinical practice of Amchi Jamyang Tashi at the Kalimpong Men-Tsee-Khang branch clinic in 2004/05.

Men-Tsee-Khang medical practitioners in India often evaluate the effects of Tibetan medication through biomedical blood tests even though Tibetan concepts of 'blood' or *trag* as such have little to do with the chemical analysis of blood parameters. I look at how the biomedical term 'haemoglobin' has entered into Tibetan medical practice and acquired the meaning of 'vitalized blood' (*zungtrag*), which is said to be rich in 'oxygen', which in turn is related to Tibetan medical ideas of the 'life-sustaining wind' or *sogdzin lung*. What underlies the Tibetan *amchi* correlation of *zungtrag* with 'haemoglobin' and *sogdzin lung* with 'oxygen'? How has this form of correlation influenced understandings of physiology and notions of treatment efficacy? The discussion is set in the broader context of the

ways in which Tibetan medical terms have recently been created or translated in relation to biomedical terms.[2]

Current Debates on Tibetan Medical Terminology and Translation Practices

This section reviews current debates on Tibetan medical terminology based on existing literature. Such debates are not new. Tibetans have a history of adopting and creating technical terms from different languages and cultural backgrounds (Gaffney 2000). A historical and textual study of the creation of Tibetan medical terminology would require a careful comparison of Sanskrit originals and their Tibetan translations, including their commentaries,[3] as well as research into medical terminology of the Dunhuang manuscripts and Zhang Zhung medical literature. In the following two sub-chapters, the debate around the 'humoural' terminology of the *nyépa* and present examples of translation issues from Tibetan medical practitioners in Lhasa and Dharamsala are outlined.

'Humours' or 'nyépa'?

Early on in the history of Western scholarship on Tibetan medicine, Obermiller noted that the underlying epistemologies on which the meaning of Tibetan medical terms is based can get lost in a literal translation process, particularly since a strictly philological approach can often fail to include living oral traditions (1989 [1935]: 15). Literal translation efforts have at times resulted in the adoption of terms that make the meaning of the original medical Tibetan terms ambiguous (Obermiller 1989 [1935]: 16–17). Obermiller's argument applies to more complex medical terms, such as the three *nyépa*, which are discussed in more detail below. Nevertheless, literal translations of basic medical terms, such as *chinpa* for liver, are common and accurate, even though the understanding of the physiology and function of the organ might differ significantly between biomedicine and Tibetan medicine.

The popular translations of *lung*, *tripa* and *péken* as 'wind', 'bile' and 'phlegm' respectively, exemplify Obermiller's point. The literal English renderings of the three basic physiological principles, in Tibetan called *nyépa* (lit. 'default'),[4] as 'wind', 'bile,' and 'phlegm' carry only a trace of what these *nyépa* mean in all their broad aspects (Tokar 2008: 234). One could argue that by now, for instance, 'wind' is a widely accepted and fairly well

studied notion in anthropology in general[5] and using the English translation would be less problematic because it would be received by a sensitized readership, well aware of the different guises 'wind' can take. Nevertheless, since there is no uniform agreement on how to translate these terms, authors are continuously challenged to address the issue and justify the position they take.

To give an example: some studies on *lung* and the 'life-wind' – one of the five types of *lung* in Tibetan called *soglung* – have stressed not so much the phenomenological aspects but the social and political significance of *lung* illnesses (see, for example, Adams 1998, 2002a, 2002b; Bassini 2006; Gutschow 1997; Jacobson 2002, 2007; Janes 1995, 1999a, 1999b; Prost 2006a, 2007; Rucinska 2007). These authors vary in their translations of *lung*, mainly using the Tibetan term, interchanging both 'wind' and *lung*, or placing their English translations in quotation marks, arguing that the 'concepts to which they refer are not the same as those invoked by the same words in medical or everyday … English' (Jacobson 2002: 274). One of the arguments brought forth is that the complex epistemologies of Tibetan medicine are 'very unlike those found in Western epistemology' (Adams 1998: 83).

The ongoing debate on whether Tibetan technical terms should be translated into English at all can be summarized briefly by taking the example of the common term *nyépa* itself, which has primarily been translated into English as 'humour'. The term 'humour' literally means 'fluid' or 'moisture', deriving from the Latin 'humor', and is linked to Galenic concepts of the four humours 'blood', 'phlegm', 'black' and 'yellow bile'. Despite some early Greek influences on Tibetan medicine (Beckwith 1979),[6] these translations remain eurocentric because they miss the polysemous meaning of the terms. This has even been critiqued by doctors of Tibetan medicine themselves (for example, Gyatso 2005/2006, Tokar 2008), who prefer to address the complex definitions of their terms, which other authors have often overlooked. Tokar, a Western practitioner of Tibetan medicine practising in New York, argues that Tibetan medical key concepts should be left in their original language and understanding supported by detailed definitions of these terms. His experience is that 'patients are aided by precise language when trying to understand new ideas regarding their health' (Tokar 2008: 234).

On a related note, Yontan Gyatso argues that *nyépa* is both a vernacular and technical term with two very distinct sets of meanings. As a vernacular term, it simply means 'default' – which is also the literal translation of the Sanskrit *dosha* – whereas as a technical medical term *nyépa* can indicate

'disease', 'a cause of a disease', 'a force or energy in the body that has a physiological function', as well as 'a gross or subtle component of the body' (Gyatso 2005/2006: 111).

Western authors have often simplified the meanings of *nyépa*, giving preference to definitions that stress the understanding of health and illness as balance or imbalance of the 'humours'. I agree with Samuel that these overemphasized ideas of holism and balance might be a projection of what Westerners like to see in their idealized view of 'Tibetan medicine' (Samuel 2001: 248). Gyatso argues that the understanding of *nyépa* as being 'causes of diseases only when they are unbalanced' (for example, Winder 1981: 5–6, quoted in Gyatso 2005/2006: 113) is 'essentially wrong' (Gyatso 2005/2006: 113). He rightly claims that the three *nyépa* are also 'causes of diseases when they are in a state of balance. But when disturbed and rendered imbalanced they are the characteristic entities of diseases, for they harm and bring suffering to body and life'.[7]

In this context one needs to be aware of possible cross-fertilization in translation issues. *Amchi* who have practised for a long time in Western contexts are likely to adopt or simply emphasize this language of 'balance' to communicate the major distinctions between Tibetan and biomedical ideas of health. Perhaps the need to stress ideas of 'balance' in Tibetan medicine emerges in medical encounters in which *amchi* face a fundamentally different medical system.

The above examples point to the complex nature of both Tibetan physiology and the use of terms to 'gloss' meaning and provide literal translations where more complex terminologies would be more suitable. The next section discusses how the complex nature of certain Tibetan medical concepts and practices has inspired *amchi* to use and translate biomedical terms into Tibetan.

Translation Issues in Lhasa and Dharamsala

Despite their advocacy for using Tibetan terms, doctors of Tibetan medicine have also shown a tendency to find biomedical equivalents for them. This is partly a result of contemporary Tibetan medical practitioners being increasingly exposed to patients of diverse ethno-cultural backgrounds (e.g., Tibetan, Nepali, Indian, Euro-American, Japanese, etc.), who often consult both biomedical and Tibetan doctors. Most of these patients have a lay understanding of the biomedical concepts of anatomy, physiology, diagnosis and treatment. In India, Tibetan medicine has been and is still considered as 'expert knowledge', and not easily accessible for

lay patients, especially non-Tibetans, who may consult one of the *amchi* in the fifty Men-Tsee-Khang branch clinics across India. In comparison, biomedicine is more freely available, sold over the counter, and has a significant influence on patients' health choices (e.g., Nichter and Lock 2002, Strässle 2007). It is often the fact that patients use both Tibetan and biomedicine that necessitates discussions among *amchi*, and with their patients, about Tibetan medical terminology.

Government and regional policies, mediated by financial and political concerns, shape views on what 'science' means, and have also impacted translation issues. In the following cases, the dynamics of 'scientification', 'modernity' and the 'transformation' of Tibetan medicine in its encounter with biomedicine become apparent in issues of translation. Adams, in her research on modernizing medicine at Lhasa Mentsikhang in the TAR, concludes that Tibetan models of anatomy are identified by Tibetan doctors as 'less concrete' than biomedical concepts: 'In order to make them appear more concrete, biomedical terminologies are often adopted as translations of Tibetan ideas' (Adams 2007: 34). To give an example from TAR medical institutions, *lung*, which is the term of one of the *nyépa* but also describes certain mental illness complexities, is translated as 'anxiety disorder' or simply 'depression' (Adams 2007: 34). Translations are not only a matter of vagueness versus accuracy but are embedded in larger political and economic structures. Engaging with biomedical concepts is also a prerequisite for modern Tibetan medical practice in the TAR where administrative demands require 'keeping patient records that include use of standardized biomedical health tests (from X-ray and ultrasound to blood and urine tests)' (Adams 2002a: 545).

In Men-Tsee-Khang clinics in India, such records are not a standard requirement but are collected by *amchi* who are interested in providing biomedical proof for the effectiveness of Tibetan drugs. However, since patients have to pay for these tests themselves, it is not always possible to collect such 'proof'. In the following, I briefly look at published ethnographic examples from Lhasa (Adams 2007) and Dharamsala (Prost 2006b) that highlight some of these translation dynamics.

Prost presents views from Tibetan doctors in Dharamsala, who are confronted with the choice of either conforming to the requirements of standard biomedical terminology used in clinical trials or retaining Tibetan terms and expressing confidence in their own medical system, which is enjoying a growing popularity in India and abroad (Prost 2006b: 136). She has observed that Tibetan doctors often believe they will gain more respect

and acceptance from foreign biomedical practitioners by using biomedical terminology (Prost 2006b: 135). From her article, it appears that the translation process happening at Mentsikhang in the TAR has been 'substantially modifying both the theory and practice of Tibetan medicine', while in the Indian exile community this process seems to be more of a 'comparative' nature, in the sense that Tibetan doctors employ more 'selective translations' of terms in order to clarify the differences and similarities between their system and biomedicine (Prost 2006b: 137).

However, the process of translating medical terms is not straightforward and needs a careful nuanced approach. I would agree with Prost that there is certainly a striking difference between the way translations are carried out in Dharamsala and Lhasa, but this apparent distinction should not lead to premature generalizations on either side. There are, in fact, important differences in how these translation processes play out among patients and physicians and even among the community of medical practitioners themselves. There is scope for more valuable research here, and I only introduce two examples from existing publications to sketch the landscape.

In Lhasa, translation issues are by no means a debate with unified views between 'Tibetans' versus 'non-Tibetans'. Adams shows that among Tibetan medical practitioners at the Lhasa Mentsikhang, the views on translating and interpreting certain anatomical structures differ sharply. She illustrates this point by citing the example of how the three invisible channels, *tsasum*, are translated. Some doctors try to establish 'that the channels in the adult body are equivalent to the anatomically visible nervous system, the arterial flow of the blood and the venous flow of blood which, respectively, stand for the white, red and black channels in the Tibetan system' (Adams 2002a: 550). Others argue that the invisible channels 'are the location of the body's subtle wind' and are integral to scientific Tibetan medical theory (Adams 2002a: 546). Interestingly, both sides have labelled their investigation 'scientific'. This example shows that establishing medical terminology can be seen as 'scientific' from various perspectives, but that finding biomedical equivalents for Tibetan medical terms plays a major role in just one side of this debate. Obviously, ideas of 'science' are not uniform among Tibetan *amchi* and are also not necessarily limited to the use of biomedical terminology.

In India, the range of translation methods utilized in recent Tibetan medical literature (e.g., literal translation, phonetic appropriation, recasting the medical meaning into Tibetan terms, or using the biomedical term itself) shows that the community of Dharamsala Men-Tsee-Khang trained Tibetan physicians has not adopted a uniform approach to translating

medical terms, as we will see below. Prost mentions that Tibetan practitioners who were involved in clinical trials 'have been confronted with the legal and epistemological difficulties arising from hasty equivalence-making' and are now rather opposed to direct translations between the two systems (Prost 2006b: 135–36). For legal reasons, some Men-Tsee-Khang *amchi* have been stressing the differences between Tibetan and biomedical equivalents of certain diseases, such as diabetes, something that has not been adopted by the general lay patient population, which continues to use Tibetan or biomedical terms without much differentiation (Prost 2006b: 135).

In sum, processes of translation between biomedicine and Tibetan medicine are marked by ongoing negotiations between conservative and progressive elements, which are linked to wider political and religious agendas. Whereas in the TAR the scientific debate about Tibetan concepts exists in relation to prevalent politics and the effort to present Tibetan medicine as 'non-religious' (Adams 2001, 2002a, 2007), Tibetans in Indian exile generally do not deny the Buddhist impact on Tibetan approaches to science. An example here is the 'science for monks' project in India, mentioned by Prost (2006b: 138–39), through which monks have received a basic science education, a project which has been enthused by the Fourteenth Dalai Lama's personal interest in science. The involvement of religiously trained monks in such translation projects has given the translation of Tibetan scientific vocabulary in India more of a religious grounding. Aided by a global tendency to 'scientize' Buddhism, science in turn is more readily interpreted within Buddhist world-views.

General Characteristics of Tibetan Medical Terms

In order to understand how translations between biomedicine and Tibetan medicine are occurring, it is important to ask the following question: what actually classifies as a 'medical term' in Tibetan medicine? Tibetan medical terminology seems to encompass more than what is commonly taken to be 'medicine' in the biomedical sense. For example, the Tibetan medical standard work of the *Four Tantras* (*Gyüshi*) comprises chapters on dream analysis, signs of death, as well as detailed descriptions of personality characteristics based on the various types of *nyépa* constitutions. The content deals with diet and life-style, as well as a whole range of psychological aspects of the body-mind inter-relationship, characteristic of both Ayurvedic and Tibetan medical theory. Tibetan medical terms are

derived from terminology connected to diet, behaviour, the environment, astrology, philosophy and medical history. These terms often overlap in their meaning with technical terms from anatomy, physiology, diagnosis, therapy and pharmacology (see, for example, Drungtso and Drungtso 2005 [1999]).

The medical context is not only wide-ranging, but meanings of medical terms are often polysemous as, for example, the term *nyépa* shows. This is not unusual for 'scholarly medical traditions' (Bates 1995), and has already been illustrated for other Asian medical systems. That there are different interpretations of medical terms in texts and in practice is a characteristic of Asian scholarly medical traditions (Hsu 2000: 217). Hsu shows that medical terms, especially when they belong to the spiritual domain, such as 'spirit' or *shen*, have numerous meanings that differ in institutional and private clinical contexts. She argues that 'the meaning of the technical terms that evolved in those scholarly medical traditions is notoriously polysemous and dependent on the context in which they occur' (Hsu 2000: 219, see also Hsu 1999: 116).

Apart from the polysemy of many medical terms, the character of the Tibetan language itself has influenced ways of translating and creating medical terms. The Tibetan language is monosyllabic in nature, and meaning is basically syllabic. Most of the syllables 'have meaning independent of the compound word (morpheme) in which they are found. […] This syllabic structure affords tremendous flexibility with respect to both expression of new ideas and concepts and the expression of old ones in new and original ways' (Goldstein 1984: xi). Thus, many medical words in Tibetan were formed by compounding monosyllables; for example, *médrö*, the technical term for 'digestive heat' is compounded of the monosyllables *mé* meaning 'fire' and *drö* meaning 'warmth' (cf., Prost 2006b: 133). In the past, this language characteristic enabled Tibetan and Indian translators to form entirely new compound words as equivalents for Sanskrit medical terms. Today, it offers possibilities to create new words for biomedical terms in the Tibetan language. However, it also makes translations of Tibetan medical works into other languages extremely difficult: a sentence in which the meanings of all monosyllables are known may not make any sense at all if the technical meanings of the compounds are not identified.

Finally, the *Gyüshi* is written in verse form and parts of compound words have been omitted in order not to interrupt the flow of rhyme and rhythm. The identification of such technical compounds is possible only with the help of detailed Tibetan commentaries on the respective root texts and the

guidance of an experienced Tibetan physician. Any deeper textual analysis of these texts would require a careful comparison with Sanskrit Ayurvedic terminology, or even earlier works from Dunhuang to be contextualized within medical practice of their time.

Since the 1950s, Tibetan medicine has been exposed to an increasingly globalized interest. Nowadays, Tibetan physicians often teach and treat patients abroad. While for Tibetan Buddhist studies, there are schools for translators and various dictionaries for specific Buddhist terminology, Tibetan medicine still lacks adequate publications of translations of key medical literature,[8] although by now some useful Tibetan-English medical dictionaries have appeared (for example, Drungtso and Drungtso 2005 [1999]). In the global encounters between Tibetan *amchi* and biomedical practitioners and patients, the recurring problem for *amchi* is to find adequate explanations or equivalents for Tibetan medical terms in order to communicate with non-Tibetan speaking patients, students or biomedical colleagues. Attempts have been made by Tibetan scholars and Tibetan medical practitioners to address these problems by enlarging the corpus of Tibetan medical terminology in various ways. In the following, I sketch a few of those attempts.

Creating New Tibetan Medical Terms for Biomedical Equivalents

The medical dictionary entitled *Dictionary of Sowa Rigpa, the Mind Ornament of Yuthok* (*Gso ba rig pa'i tshig mdzod g.yu thog dgongs rgyan*), published in Lhasa (Wangdu 1982), presents thirty-one plates with modern anatomical drawings. The labels use Tibetan terms for all major blood vessels, organs, bones and muscles. Anatomical terms previously unheard of in Tibetan medical texts appear here, as for example, the pancreas (*phowa shermen*, 'moisture gland of the stomach'), or the appendix (*gyulhag*, 'something that remains'). The subtle channels, as well as the organ systems which relate to vulnerable points, such as the ones depicted on one of the seventeenth-century medical paintings, do not appear here (see Parfionovitch et al. 1992: 44; figure 6.1.).

The monosyllabic nature of the Tibetan language makes the creation of these new medical terms quite simple. However, the debates surrounding these anatomical perceptions are more complex, as outlined above. Wangdu's plates support one side of the debate in which 'the only aspects



Figure 6.1. An anatomical painting depicting vulnerable points and the organ systems from the Tibetan medical paintings of the seventeenth century (Parfionovitch et al. 1992: 44).

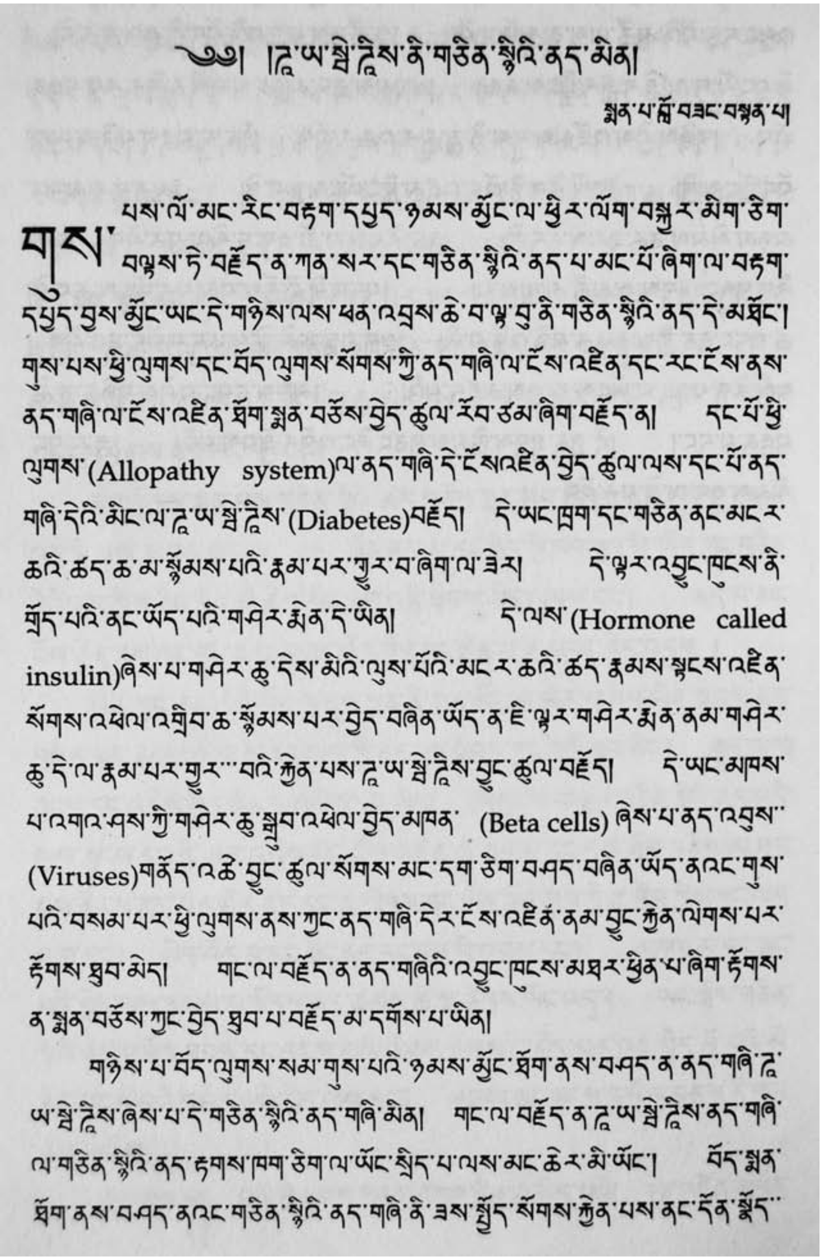
of traditional theory that are scientific are those with Western equivalents' (Adams 2002a: 551). The anatomical sketches by Wangdu are similar to the plates published in Lhasa in 1978 in the medical book *The New Dawn Sowa Rigpa Compendium* (*Gso rig snying bsdus skya rengs gsar pa*),[9] (see discussion by Prost 2006b: 136–37). Both works reflect approaches taken in the TAR to introduce the biomedical anatomical gaze to the Tibetan medical curriculum. In India, I have seen both textbooks used frequently by Chakpori as well as by Men-Tsee-Khang medical students.

However, Tibetan doctors in Indian exile have developed a different strategy to deal with biomedical terms. This analysis is partly based on the published proceedings of a Men-Tsee-Khang conference on clinical research on cancer and diabetes in Tibetan medicine (Men-Tsee-Khang 1998; cf., also Czaja in this volume). To understand which methods of correlation, translation or transliteration are available to *amchi* and to come to an understanding of how they impact on medical dialogue, I outline two methods used in these conference proceedings.[10]

Phonetically Transcribing Biomedical Terms in the Tibetan Script

In some of the articles biomedical terms have not been translated into Tibetan but instead have been phonetically transcribed into the Tibetan script using Sanskritic letters. The biomedical term is linked to a Tibetan term, but is not reduced to an equivalent. This allows the Tibetan term to retain a definition in its own right. The publication has applied this method mainly to two biomedical terms that are discussed in the two main sections of the book: diabetes (transcribed as D'a ya sbe T'is), which is linked to the Tibetan term *cinnyiné* ('the disease of urinating profusely'); and cancer (transcribed as *kan sar*), which is related to the Tibetan term *dräné*. The latter is discussed quite controversially among different doctors of Tibetan medicine (see Czaja in this volume).

Yet, also in the case of diabetes, not everyone agrees to translate it with *cinnyiné*. Amchi Lobzang Tenpa, in particular, argues that *cinnyiné* is based on different physiological concepts (1998: 150–52; see figure 6.2.). According to Tibetan understanding, *cinnyiné* begins in the stomach where, due to lack of digestive heat, the *chyle* remains undigested and cannot be properly separated into nutrients and waste. This negatively affects the building up of the 'seven bodily constituents'[11] (Amchi Lobsang Tenpa



༄༅། །ཌ་ཡ་སྦི་ཊིས་ནི་གཅིན་སྙིའི་ནད་མིན།

སྨན་པ་བློ་བཟང་བསྟན་པ།

གུས་པས་ལོ་མང་རིང་བརྟག་དཔྱད་ཉམས་མྱོང་ལ་ཕྱིར་ལོག་བསྐྱར་མིག་ཅིག་བལྟས་ཏེ་བརྗོད་ན་ཀན་སར་དང་གཅིན་སྙིའི་ནད་པ་མང་པོ་ཞིག་ལ་བརྟག་དཔྱད་བྱས་མྱོང་ཡང་དེ་གཉིས་ལས་ཕན་འབྲས་ཆེ་བ་ལྟ་བུ་ནི་གཅིན་སྙིའི་ནད་དེ་མཐོང་། གུས་པས་ཕྱི་ལུགས་དང་བོད་ལུགས་སོགས་ཀྱི་ནད་གཞི་ལ་ངོས་འཛིན་དང་རང་ངོས་ནས་ནད་གཞི་ལ་ངོས་འཛིན་ཐོག་སྨན་བཅོས་བྱེད་ཚུལ་རོབ་ཙམ་ཞིག་བརྗོད་ན། དང་པོ་ཕྱི་ལུགས་(Allopathy system)ལ་ནད་གཞི་དེ་ངོས་འཛིན་བྱེད་ཚུལ་ལས་དང་པོ་ནད་གཞི་དེའི་མིང་ལ་ཌ་ཡ་སྦི་ཊིས་(Diabetes)བརྗོད། དེ་ཡང་ཁྲག་དང་གཅིན་ནང་མངར་ཆའི་ཚད་ཆ་མ་སྙོམས་པའི་རྣམ་པར་གྱུར་བ་ཞིག་ལ་ཟེར། དེ་ལྟར་འབྱུང་ཁུངས་ནི་གྲོད་པའི་ནང་ཡོད་པའི་གཤེར་སྨིན་དེ་ཡིན། དེ་ལས་(Hormone called insulin)ཞེས་པ་གཤེར་རྒྱུ་དེས་མིའི་ལུས་པོའི་མངར་ཆའི་ཚད་རྣམས་སྐྱངས་འཛིན་སོགས་འཕེལ་འགྲིབ་ཆ་སྙོམས་པར་བྱེད་བཞིན་ཡོད་ན་ཇི་ལྟར་གཤེར་སྨིན་ནམ་གཤེར་རྒྱུ་དེ་ལ་རྣམ་པར་གྱུར་་་བའི་རྐྱེན་པས་ཌ་ཡ་སྦི་ཊིས་བྱུང་ཚུལ་བརྗོད། དེ་ཡང་མཁས་པ་འགའ་ཤས་ཀྱི་གཤེར་རྒྱུ་སྒྲུབ་འཕེལ་བྱེད་མཁན་ (Beta cells) ཞེས་པ་ནད་འབུས་་(Viruses)གནོད་འཚེ་བྱུང་ཚུལ་སོགས་མང་དག་ཅིག་བཤད་བཞིན་ཡོད་ནའང་གུས་པའི་བསམ་པར་ཕྱི་ལུགས་ནས་ཀྱང་ནད་གཞི་དེར་ངོས་འཛིན་ནམ་བྱུང་རྐྱེན་ལེགས་པར་རྟོགས་ཐུབ་མེད། གང་ལ་བརྗོད་ན་ནད་གཞིའི་འབྱུང་ཁུངས་མཐར་ཕྱིན་པ་ཞིག་རྟོགས་ན་སྨན་བཅོས་ཀྱང་བྱེད་ཐུབ་པ་བརྗོད་མ་དགོས་པ་ཡིན།

གཉིས་པ་བོད་ལུགས་སམ་གུས་པའི་ཉམས་མྱོང་ཐོག་ནས་བཤད་ན་ནད་གཞི་ཌ་ཡ་སྦི་ཊིས་ཞེས་པ་དེ་གཅིན་སྙིའི་ནད་གཞི་མིན། གང་ལ་བརྗོད་ན་ཌ་ཡ་སྦི་ཊིས་ནད་གཞི་ལ་གཅིན་སྙིའི་ནད་རྟགས་ཁག་ཅིག་ལ་ཡོང་སྲིད་པ་ལས་མང་ཆེར་མི་ཡོང་། བོད་སྨན་ཐོག་ནས་བཤད་ནའང་གཅིན་སྙིའི་ནད་གཞི་ནི་ཟས་སྤྱོད་སོགས་རྐྱེན་པས་ནང་དོན་སྣོད་་

Figure 6.2. A sample page of the Men-Tsee-Khang conference proceedings where medical terms are inserted in English into the Tibetan text (Amchi Lobsang Tenpa 1998: 150).

1998: 151). In contrast, what Amchi Lobsang Tenpa labels D'a ya sbe T'is is based on what he calls 'sweet particles in the blood and urine'.[12] The advantage of this transcription method is that it allows for the Tibetan disease to be defined by its own name and within its own physiological context and still be correlated to a biomedical disease category, i.e., diabetes.

Inserting Biomedical Terms in English into the Tibetan Text

In the same paper on diabetes, Amchi Lobzang Tenpa explains the biomedical physiology of D'a ya sbe T'is, mentioning the English terms 'Allopathy system', 'Hormone called insulin', 'Beta cells' and 'Viruses', which are inserted with parentheses in English into the Tibetan text (Amchi Lobsang Tenpa 1998: 150; see figure 6.2.). Inserting biomedical terms into the Tibetan text without transcribing or translating them into Tibetan requires the *amchi* to be bilingual. The visual image of the text already clearly separates biomedical from Tibetan medical terms and the two medical systems are standing apart, although the biomedical terms are then explained in Tibetan.

Interestingly, the publication is not consistent in applying the methods it introduces. Some of the terms appear in their Tibetan transcription only, while others also have the Tibetan equivalents. For example, the word 'pancreas' is used in English (Men-Tsee-Khang 1998: 17), in the Tibetan Wylie transcription as *pven ki ri ya'i* (Men-Tsee-Khang 1998: 17) as well as in its Tibetan translation as *shermen* (Men-Tsee-Khang 1998: 136). It remains unclear if these are individual choices by the various contributors and if so, what these choices are based on. In sum, the published papers do not present a uniform system of translation of biomedical terms. This is not surprising, considering that what we call 'Tibetan medicine' itself is not a coherent body of practices (Samuel 2008: 251ff), and I would add here, neither is what is labelled *sowa rigpa*. A further detailed analysis of this work, combined with ethnographic research, might reveal some of the reasons underlying these ambivalences.

I wish to point out with the above examples that correlating biomedical terms with Tibetan terms is not a straightforward issue. The interpretation of medical terminology in Tibetan clinical practice should be an important focus of ethnographic research if we want to understand the underlying ideas of how *amchi* correlate or directly translate medical concepts from

two very different medical systems and how Tibetan communities might interpret modern ideas of health and illness in relation to classical Tibetan medical concepts. The following ethnographic account will elucidate my point in more detail.

The Interpretation of the Terms 'Oxygen' and 'Haemoglobin' in a Tibetan Medical Clinic: an Ethnographic Account from Kalimpong and Darjeeling

During my doctoral research on Tibetan concepts of lifespan (Gerke 2008), I discussed with Tibetan *amchi* the various life forces found in Tibetan medicine. My research was located in the urban centres of Kalimpong and Darjeeling in the foothills of the Himalayas in the Indian state of West Bengal, a region with which I had been familiar since 1992. Several thousand Tibetans live in Kalimpong and Darjeeling.[13] Some of them are early settlers and have been there for generations. Locally called Bhutias, they arrived during the Tibet trade along the Kalimpong–Lhasa trade route, which was closed in 1961. Others are post-1959 refugees or recent newcomers. Both towns have a Men-Tsee-Khang branch clinic with mostly Dharamsala trained *amchi* working on a rotational basis.[14] Darjeeling is also home to the Chakpori Medical Institute, founded by the late Trogawa Rinpoche in 1992. Students there use the same textbooks and mainly follow the Men-Tsee-Khang curriculum and sit for their final examinations at Men-Tsee-Khang in Dharamsala. They differ, however, in terms of their approach to practice. In spring 2008, the *amchi* working at the clinic of the Chakpori Medical Institute in Darjeeling told me that he does not send his patients for biomedical blood tests, nor does he measure the blood pressure of patients. Instead, he focuses on classical Tibetan diagnosis, such as pulse and urine analysis. He does not look at the biomedical reports that his patients frequently bring along for consultations, but refers them to a biomedical doctor. He explained that the Tibetan system is exclusive and cannot be mixed with biomedicine. Such medical exclusiveness is unusual in the Darjeeling Hills, home to multiple Indian and Nepali ethnic groups. These populations are characteristically exposed to medical pluralism but with a strong biomedical presence that is often used in combination with many different medical practices, including ritual healing (Strässle 2007, Gerke 2008).

The Men-Tsee-Khang doctor with whom I worked in Kalimpong, Amchi Jamyang, was open to biomedical ideas, which led to interesting talks over a period of two years during my doctoral fieldwork. Amchi Jamyang was born in Nepal. Early in life, he was ordained as a Kagyüpa monk at the Rumtek monastery in Sikkim and graduated from the Dharmasala Men-Tsee-Khang in 2002. He was working at the Kalimpong Men-Tsee-Khang branch clinic at the time of my fieldwork and we developed a fruitful working relationship over the course of many visits. We also kept in touch through e-mail and phone after he was transferred to Jaigon at the India-Bhutan border.

While there are various reasons why people use Tibetan medicine, Amchi Jamyang and other *amchi* I met were used to treating patients with severe cases in which biomedicine had failed. Thus, it was not unusual for patients to walk into his consultation room with their biomedical reports, X-ray images, ECGs and blood test results. According to Amchi Jamyang, this happened especially in Indian urban areas (he worked in the Indian cities Bangalore and Siliguri before coming to Kalimpong). Amchi Jamyang was taught at Men-Tsee-Khang Dharamsala how to read such biomedical reports. The Men-Tsee-Khang teacher at the time was a Tibetan biomedical practitioner who was able to explain biomedical concepts to the students in Tibetan. Amchi Jamyang also kept a few biomedical books in English in his clinic and studied biochemistry and physiology. In addition, he had a sphygmomanometer on his desk and regularly checked the blood pressure of his patients during consultations. Tibetan pulse diagnosis was the most important diagnostic technique for Amchi Jamyang, and he prescribed only Tibetan medicines. Due to his special interest in astrology, he also consulted the Tibetan calendar to select an auspicious date for special treatments, such as moxibustion. He referred Tibetan Buddhist patients to the nearby monastery when he felt a divination and ritual treatment were necessary. Nevertheless, Amchi Jamyang often sent patients for blood tests, which provided him with easier and clearer parameters with which to test the effect of Tibetan medicines. How did he explain this? He said that biomedical diagnostic parameters made it possible to show his patients the efficacy of his Tibetan medical treatment, about which he himself had no doubt. He had no internal conflict about which of the two medical systems was more efficacious, but because his patients had little knowledge of either tradition, this helped them to understand how well Tibetan medicine worked.

One received the impression that Amchi Jamyang, as well as other *amchi* in the region, did not feel themselves to be in competition with biomedicine

but rather they were engaged in a mutual interaction. In Kalimpong, this interaction with biomedicine happened in the absence of a direct communication and professional exchange with biomedical practitioners and so it was largely based on individual *amchi*'s terms. Apart from his education at the Men-Tsee-Khang in Dharamsala and his private studies, it was essentially through his patients who freely combined medical systems, and through their medical records, that Amchi Jamyang was exposed to biomedical practices.

One day, I asked Amchi Jamyang about the concept of 'blood', *trag*, in Tibetan medicine. *Trag* is a Tibetan medical term with several meanings. Generally, in the *Gyüshi* the three *nyépa* – *lung, tripa* and *péken* – appear in their combination of three, but I found some instances where *trag* occurs together with *lung, tripa* and *péken* giving the impression of a 'fourth' *nyépa*. However, *trag* is generally not seen as a part of the three *nyépa*. It can be a name of a disease, or a characteristic feature in pulse diagnosis. It is mainly seen as an important part of Tibetan physiology, in particular the seven bodily constituents, *lüzung dün* (see note 11). Amchi Jamyang explained that '*Trag* is part of the *lüzung dün*. In Tibetan medicine we believe that the blood is made in the liver (*chinpa*), not like in Western medicine, where it is made in the bone marrow. For us, the liver is the most important organ related to *trag*.'

Trag can also be a part of a name of a specific type of a disease that relates to the characteristics of *tripa*, which is hot in nature. The relationship between *trag* and the liver – also one of the main seats for the *nyépa tripa* – is reflected in the fact that *trag* frequently occurs in the *Gyüshi* together with *tripa*.[15] Drungtso and Drungtso translate *trag* and *tripa* as 'Blood and Bile. Diseases which are like fire and heat by nature' (Drungtso and Drungtso 2005: 49).

I was interested in how Amchi Jamyang understood 'blood' and linked it to ideas of longevity. Our discussions at that time took place in Tibetan. In his response, he used two English terms, 'haemoglobin' and 'oxygen'. He said 'There is no 'haemoglobin' as such in Tibetan medicine, and you won't find it in the *Gyüshi*. But *amchi* use the term frequently and also check the efficacy of their medicines through blood reports.'

At the time, he was treating two patients in Kalimpong for low levels of haemoglobin. Both of them reported a raise of 1.5 gm/dl in their haemoglobin after one month of treatment with Tibetan medicine. Amchi Jamyang showed me the blood reports, which he was able to read, interpret and link up with his treatment scheme. I asked him if he could feel a low haemoglobin level in the pulse or if he relied entirely on the blood reports.

He said 'The pulse shows signs of high *lung* when the haemoglobin is low. The pulse also feels weak and can show a combination of *pé* [*kan*] *lung* when the haemoglobin is low. And in the cases of 'diseased blood', *nétrag*, I find a *tripa* and *trag* pulse.'

Here, *trag* describes a type of pulse that has specific qualities, again similar to *tripa*, and indicates an increase of 'diseased blood'. For Amchi Jamyang the pulse diagnosis remained the major diagnostic tool. The blood tests were secondary for his diagnosis, but primary for the communication with the patient, who was used to blood test reports. As Amchi Jamyang explained during one of our later discussions:

> Tibetan medicine and medical reports are a good combination because without the report the patients do not really believe or know that the medicine works. When I feel the pulse I cannot say 'your haemoglobin is 12.8'. I have no measurement they can understand. The HB parameter is easier and more accurate. The new patients, who come with a long history of often unsuccessful biomedical treatment, want to know how our medicine works. I cannot tell them the details about the pulse, but I can tell them the blood test result. They can see that our medicine works. It is some kind of a proof. I do not need that proof because I know our medicine works, but it helps. It also helps my confidence.

When I asked Amchi Jamyang if there was a Tibetan word for 'haemoglobin', he mentioned the term *zungtrag*, which means 'vitalized blood'. *Zungtrag* is seen in opposition to *nétrag*, which translates into 'bad' or 'diseased blood'. He then used the English term 'oxygen' to explain the difference between these two types of blood. According to him the 'vitalized blood' has a lot of 'oxygen'. Again, there is no concept of 'oxygen' in Tibetan texts, but young Men-Tsee-Khang trained doctors seem to use the term very freely. According to Amchi Jamyang:

> *Zungtrag* has a lot of oxygen and builds up 'blood' (*trag*) and good health. It is the type of blood that forms part of the 'seven bodily constitutents' (*lüzung dün*). Haemoglobin is synonymous with the *trag* of those *lüzung dün*. Oxygen is the same than the *sogdzin lung*. *Soglung* (lit. 'life-wind') is actually the term for a mental illness, but *sogdzin lung* (lit. 'life-sustaining wind') is one of the five types of *lung*.

Logically it follows from here that *zungtrag* has a lot of *sogdzin lung*, in the same way that haemoglobin has more oxygen. Amchi Jamyang's understanding was clear and referred to the vitalizing power of the 'good blood', but what was his underlying rationale to correlate 'oxygen' with *soglung*? He explained:

> *Sogdzin lung* you cannot see with your eyes, oxygen you also cannot see; *sogdzin lung* is situated in the heart, oxygen is also pumped through the heart. *Sog* is life; it is the pathway for *lung*. Without oxygen there is no life. Without *soglung* you will die. Now, *zungtrag* is the important and good blood and has a lot of oxygen and a lot of *sogdzin lung*. To build the body's blood is most important. *Zungtrag* has a great power (*nüpa*). If the *zungtrag* is strong, the 'supreme essence' *dangchog*[16] will be of good quality, which in turn produces long life.

Here, the amchi reveals some of the reasons behind his method of correlating the medical terms from two different medical systems. Interestingly, perceptions of vitality and its topographic location in the body are at the base of his comparison. I shall take up this point further in the conclusion of this chapter.

In contrast to the vitality of the 'good blood', the *nétrag* is the 'diseased blood' that forms through toxins and waste products. It is *nétrag* that is let out during blood-letting. The main medicine that supports the cleansing of *nétrag* from the body is a decoction of three myrobalan fruits, called Dräbu Sumtang, a combination of Chebulic myrobalan or *Terminalia chebula* (Arura), Beleric myrobalan or *Terminalia belerica* (Barura) and Indian gooseberry or *Phyllantus emblica* (Kyurura), also known as Aru-Baru-Kyuru, all three of which comprise the popular Ayurvedic drug known as Triphala churna. Amchi Jamyang explained his course of treatment:

> Only if Dräbu Sumtang thang is not available, I will choose medicines like Gurgum 13, Tsenden 18, Yunying 25 and Ratna Samphel. The choices of medication are based on each doctor's individual experiences. Each *amchi* has his *laglen*,[17] and this is my choice of medicines. First we use Dräbusum. It separates the good from the bad blood and expels the bad one.

To build up the 'vitalized blood', he used a drug called Dashel Dütsima. His repeated experience was that it could raise the haemoglobin level by one gm/dl over the course of a month. During the treatment, patients were usually compliant in getting regular blood tests done. However, Amchi Jamyang admitted that his patient records were incomplete, since once his patients felt they were cured they did not want to spend additional money on blood tests, endoscopies or expensive scans. He regretted the fact that the patients' subjective improvement and his pulse reading were the only parameters at his disposal to show that the medicines had worked. With his interest in research, he would have liked to have shown, with quantitative measurable figures, that his treatments were successful.

Conclusion

The first part of this paper sketched the various approaches that Tibetan *amchi* have taken in the past in Dharamsala and Lhasa to translate or transcribe biomedical terms into the Tibetan language. I outlined the debate on literal translations, citing the example of the three *nyépa*, which showed the polysemous nature of many Tibetan medical concepts, making them even more difficult to translate. This and other qualities of Tibetan language and Tibetan medicine make the task of translating complex, and one that scholars of Tibetan medicine, both Tibetan and foreign, have devoted considerable time and attention to. Sometimes, these debates have focused on the question of 'science' or the question of what constitutes a valid approach to knowledge.

While the tension between 'vagueness', 'accuracy' and 'measurability' is part of larger political debates on what can or should be regarded as 'science', we also find a wide variation of translation and correlation methods between the medical systems among individual *amchi*. My observations have shown that translation issues often seem to be a matter of individual interpretation, depending on the *amchi's* exposure to patients using biomedicine (which has a palpable rural and urban divide), their involvement in research studies or clinical trials, their education,[18] and also their personal interest in biomedicine. I have suggested that the method of transcribing biomedical terms and correlating them to Tibetan disease aetiologies allows *amchi* to make more nuanced claims regarding their own specific systems of physiology. I used the examples of the attempts to translate the terms 'diabetes' and *cinnyiné* to elucidate this point.

The ethnographic account in the second part of the paper discussed how some *amchi* in Kalimpong and Darjeeling make sense of the biomedical techniques that are now available to them and their patients. In some cases, they simply avoid them, keeping separate traditions separate. In other cases, they try to blend techniques and seem to stumble through the linguistic challenge that this presents. The Men-Tsee-Khang trained Amchi Jamyang provides one method of meeting this challenge in the example of the notion of 'blood'. He correlates ideas of 'haemoglobin' and 'oxygen' with the Tibetan medical terms *zungtrag* ('vitalized blood') and *sogdzin lung* ('life-sustaining wind'). Since in India many patients come to the *amchi* and the rather unknown system of Tibetan medicine with a biomedical-oriented way of understanding illness, the measuring of 'haemoglobin' through a blood test is easier for the *amchi* because it links the Tibetan treatment to the patients' biomedical record. Moreover, by relating the Tibetan term for

'vitalized blood' to haemoglobin and monitoring the several month-long Tibetan medical treatments with monthly blood tests, Amchi Jamyang creates a diagnostic method that the patient is familiar with. While he feels comfortable within his own medical system, Amchi Jamyang uses the blood report as a kind of 'proof', primarily for the patients' sake. Furthermore, he himself gains confidence through the medical report, because he sees the blood test as a measurable parameter that is easier to communicate than his own 'invisible' pulse diagnosis, and it provides him with a figure he can note into his own medical records.

The integration of biomedical and Tibetan medical concepts and practices seen in this example is one that Amchi Jamyang describes not as competitive, but rather 'a good combination'. It allows him to make use of both systems on a diagnostic level, while the treatment remains Tibetan. By correlating medical terms from both systems, the *amchi* extends his medical vocabulary into a world that most of his patients are more familiar with and can therefore more easily relate to. The underlying process here seems similar to what I described in the first part of the paper, referring to Adams (2007) and her research in the TAR. At the Lhasa Mentsikhang the use of biomedical measures is seen by many Tibetan doctors as better than Tibetan methods for pinpointing diagnoses. One reason for this is that Tibetan techniques are difficult to learn and appear vague when compared to biomedical diagnostic categories that are 'measurable'. While linking Tibetan medicine to ideas of 'science' is primarily a political issue – and also a matter of protecting the medical system (Adams 2002a: 568–71) – Tibetan *amchi* in India integrate biomedical test results into their clinical practice, for different but equally compelling reasons. In the case presented here, blood pressure parameters and blood test results give *amchi* clearer quantitative figures than the pulse diagnosis can and they enable them to communicate more easily with their patients, who often have been exposed to biomedicine but know little about Tibetan medicine. In our conversations, not once did Amchi Jamyang use the word 'scientific' to explain why he uses biomedical test procedures. Even though he has a keen interest in research and sends copies of patients' medical records to the research department in Dharamsala, his main motivation is not to be more 'scientific'. From his statements we can conclude that the current anthropological focus on the 'scientization' of Tibetan medicine requires more nuanced and localized perspectives, in particular in terms of medical practice, in order not to overlook other local strategies that 'appear' to be part of the 'scientization' process, but are actually guided by different motives.

Amchi Jamyang's correlations of biomedical and Tibetan medical terms are based on characteristics that he considers to be similar in both systems. In the case of 'oxygen' and *sogdzin lung*, both are invisible, related to the heart and are vital to life. Haemoglobin and *zungtrag* are both related to 'blood' and especially to the vital aspects and strength of having 'vitalized blood'. These correlations have little to do with biochemical analysis, or a Western 'scientific approach'. In this case, they rather refer to similar ideas of vitality and localization in the body.

Particularity and idiosyncratic, practitioner-specific methods are a hallmark of Asian medical traditions. Thus, individual perceptions and practices should receive a stronger focus in the anthropological gaze if we want to trace the process of how these correlations are constituted and employed in *amchi* medical practice. It is in these similarities that Amchi Jamyang finds a basis for understanding another medical knowledge system so different from his own. The similarities allow him to apply selective aspects of another medical system while confirming to his patients the efficacy of his own knowledge system, about which he himself has no doubt.

Notes

1. I am aware that the term 'Tibetan medicine' is itself problematic and gives the impression of a unified system, which it is not. The definition of 'Tibetan medicine' or '*amchi* medical practice' has been discussed in recent publications (Schrempf 2007, Pordié 2008) and is also critically approached by the editors in the introduction of this volume. In this chapter, I am primarily concerned with doctors trained at the Men-Tsee-Khang Tibetan medical institution in India.
2. Parts of an earlier unpublished paper on 'Problems of Translating and Creating Tibetan Medical Terminology' have been included in this chapter (Gerke 1998).
3. So far, there have been no studies on medical terminology in Tibet before the introduction of the Tibetan script in the seventh century. The most suitable text for studying the principles according to which Indian scholars and Tibetan *lotsawa* literally created Tibetan medical terms is the *Aṣṭāṅgahṛidayasaṃhitā* by Vāgbhata. This text was written in India sometime around the seventh century and reached Tibet in the eleventh century (see Hilgenberg and Kirfel 1941 and Murthy 1996, for translations of this work into German and English respectively, and Emmerick 1977 for the link between this text and the *Gyüshi*).
4. Tibetan cosmology explains the body as a micro-organism in terms of the five elements, called *jungwa nga* – earth, water, fire, wind and space. These elements form three basic physiological principles, collectively called *nyépa*.

5. The recent JRAI volume edited by Hsu and Low (2007) on the anthropology of wind offers a range of papers dealing with 'wind' in scholarly medical traditions as well as in hunter and gatherer societies. The overall approach emphasizes the anthropology of the senses and the phenomenology of 'wind'.
6. Beckwith discusses various Greek and Arab physicians and lists the works they wrote while in Tibet, but not the influence of the four Greek humours on the *nyépa* system. However, he traces tenets of the Hippocratic oath in Tibetan medical texts (Beckwith 1979: 304).
7. This is Yontan Gyatso's translation of a quotation from the *Rgyud bzhi* II, 8: 86: *rnam par ma gyur nad kyi rgyur 'gyur la/ rnam 'gyur ma snyoms nad kyi ngo bo yin/ lus dang srog la gnod cing gdung bas so* (Gyatso 2005/2006: 113). References for the Tibetan medical standard text, *Rgyud bzhi*, are indicated as follows: I, II, III and IV refer to the respective four medical tantra sections. These are followed by the chapter and page numbers. For example, '*Rgyud bzhi* II, 5: 45' denotes the second tantra, fifth chapter, page 45. Page numbers refer to the Chakpori edition (Yutog Yönten Gonpo 1992).
8. The *Gyüshi* has so far been only partially translated into English, German and Russian (e.g., Clark 1995, Clifford 1984, Emmerick 1975, Jacobson 2000, Jäger 1999; for Russian works see Aschoff 1996). The Men-Tsee-Khang in Dharamsala is currently working on a complete translation of the *Gyüshi*, of which the first volume has been published (Men-Tsee-Khang 2008). The general handbooks on Tibetan medicine are mostly introductory writings or contain only excerpt translations. There are practically no textbooks for serious students of Tibetan medicine in modern languages. (The exception is the Chinese Tibetan translations, of which there are quite a few, available through Chinese presses.) The International Trust for Traditional Medicine (ITTM) in Kalimpong, India, has been compiling an electronic database of digitalized Tibetan medical texts (from the ninth to nineteenth centuries) in Tibetan (www.ittm.org), to support future translations of Tibetan medical texts.
9. The reference of the 1997 reprint of this work is: *Gso rig snying bsdus skya rengs gsar pa*. Lhasa: Bod ljongs mi dmangs dpe skrun khang, pp.6, 15, 378. 56 pgs. ill.
10. For more details on these conference proceedings and contested translations, in particular, in the case of 'cancer', see Czaja's chapter in this volume.
11. The *lüzung dün* are equivalent to the seven *dhatus* in Ayurveda. The *Rgyud bzhi* (II, 5: 72) describes the physiology of digestion as a continuous process of refining essences from the five elements and six tastes (sweet, sour, salty, bitter, hot, astringent), taken in the form of food. The Tibetan understanding of this process is almost identical to the descriptions in the *Aṣṭāṅgahṛidayasaṃhitā* (compared with Hilgenberg and Kirfel 1941: 2ff, Murthy 1996: 9). According to the *Gyüshi*, the digestive process takes six days and is as follows: the essence of food is refined through six stages from the organic food sap, or *chyle*, into blood, flesh, fat, bone, bone marrow and semen.
12. *khrag dang gcin nang mngar cha'i tshas cha*.

13. For demographic details see the *Tibetan Demographic Survey 1998* (Planning Council 2000).
14. I have explained the effects of these rotation practices on the role of *amchi* in the Darjeeling Hills in another article (Gerke, in press).
15. *Tri* (*mkhris*), for example, 'clears away *trag tri*' (*khrag mkhris sel byed*), 'generates *trag tri*' (*khrag mkhris skyed*), 'balances *trag* and *tri*' (*khrag mkhris snyoms par byed*), or 'increases *trag* and *tri*' (*khrag mkhris rgyas par byed*).
16. The supreme essence 'distilled' from all stages of the seven bodily constituents is known as *dangchog* (*mdangs mchog*) which is located in the heart and makes up the vital radiance of a person (*Rgyud bzhi* II, 5: 72, see also note 10).
17. *Laglen* is the medical experience gained through an apprenticeship with a senior *amchi.*
18. Prost's example on Tibetan medical students in Dharamsala preparing their own tables of biomedical equivalents for Tibetan medical terms of diseases shows that there is (not yet) a uniform method to introduce students at Men-Tsee-Khang to biomedical terms (Prost 2006b: 134).

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Part III

Therapeutic Rituals, Situated Choices

The third section of this volume explores the ways in which Tibetan medicine is used and interpreted by practitioners, patients and researchers. As the subtitle indicates, the context in which each of these chapters' ethnographic data emerges makes important observations about the flexibility of *sowa rigpa.* From Lhasa to Amdo, from India to the U.S., we see examples of how a *sowa rigpa* sensibility infuses the pragmatic and epistemological choices people make when charting a path through various forms of *sowa rigpa* and biomedicine, in pursuit of healing at multiple levels. Here, an overt concern with how *sowa rigpa* will be 'read' and interpreted by arbiters of Western science, or how *sowa rigpa* should position itself vis-a-vis its 'others', becomes secondary to more intimate concerns, negotiated between doctors and patients, between patients and their families, or within a circle of researchers and clinicians.

Although more proximal in the first two chapters (Schrempf and Gutschow) and more distal in the third (Craig), this concern with patients' experience is also a unifying theme throughout Part III. Finally, all three chapters move between two specific locales, languages and domains of expertise. Schrempf moves between *mantra* and syringe, between the diviner's home and the township clinic, between Tibetan incantations and biomedical prescriptions. Gutschow marks the shift from home to hospital as a 'safe' location for the experience of birth and, in so doing, traces the relationship between Buddhist and biomedical ways of knowing the world and relating to health and human suffering. Craig's chapter juxtaposes the Buddhist altar and the RCT (randomized controlled trial) protocol, giving voice to Tibetan questions, at once sociolinguistic and moral, about the difference between 'active' and 'inert' substances and about how to determine a medicine's efficacy.

In her chapter on health and health-seeking behaviour in contemporary Amdo, Mona Schrempf presents four case-studies that illustrate both the complexity and variability behind what patients do when they become ill, and how they understand their affliction. Yet she argues that despite the diversity of both healing and health-seeking behaviour found within these four stories, they share a 'logic of cultural healing' that incorporates a broad spectrum of practices. Indeed, traversing the literal and figurative space between *mantra* and syringe – or between iconically Buddhist and biomedical approaches to healing, respectively – does not present for patients the types of epistemological or even political quandaries that we witnessed playing out in the chapters by Gerke, Czaja, Adams, Dhondup and Le that focus on the professional sector of Tibetan medicine. Rather, Schrempf's ethnography reveals the practical fluidity in how patients make decisions and take action with regard to their health. Schrempf's chapter also points to the range of practices that can be considered, in one way or another, part of the scope of *sowa rigpa* from the perspective of both patients and healers in Amdo. Through her analysis, we come to understand that belief in the efficacy of divination, for instance, operates on principles that can be understood as simultaneously magical and pragmatic, esoteric and mundane. In many ways, it is the physical body itself that becomes the crossroads for parallel cosmologies and ideologies of healing, and the site through which different explanatory models are linked. Finally, the case-studies that Schrempf shares with us reveal just how messy efficacy is as a concept, and how difficult it is to make absolute claims about epistemological coherence within any given tradition on the ground.

Kim Gutschow's chapter focuses on what she calls the 'extension' of biomedical obstetrics into the lived worlds of rural and urban women in Ladakh. Like Schrempf's contribution, this chapter takes us into the minds and acts of culturally Tibetan patients. Specifically, Gutschow explores the forces that at once encourage and limit a paradigm shift within health-seeking behaviour: namely, the notion that hospitals, as well as homes, are acceptable, even desirable, places to give birth. By exploring the motivations and actions of Ladakhi women, the range of what constitutes efficacious practice becomes quite broad, from hospital or clinic-based pre- and antenatal care to the use of ritual blessings and the adherence to concepts of purity and pollution. Indeed, part of what she argues is that the ostensibly 'biomedical' space of the clinic or hospital is also expansive enough to include these things. And, as with the cases presented in Schrempf's chapter, we come to understand that these women's obstetrical decisions

are pragmatic and rely on trusted healers rather than ideological principles. Furthermore, individual agency – be it to exert a preference for a hospital birth or the desire to embody local Buddhist ideals about motherhood – is both shaped and constrained by the socio-economic and geographic realities of life in an intensely rugged and remote landscape. Finally, Gutschow argues that the increased biomedical presence within Ladakhi obstetrics, as well as health care in general, has not replaced Buddhist conceptions; rather, biomedical and Buddhist epistemologies of healing are intertwined, and both offer discourses and practices aimed at protecting women and children from the suffering so often associated with birth.

Sienna Craig's chapter centres on the performance of *mendrub*, here glossed as a 'medicine empowerment ritual', for the Tibetan medicine at the heart of the first randomized controlled trial (RCT) conducted in Tibet. Through ethnographic description and dialogue, this chapter explores the relationship between religion and science by chronicling the discussions that emerge when a prototypically 'religious' form, the *mendrub,* interacts with a prototypically 'scientific' form, the RCT. Craig's ethnography also addresses the question of what makes a medicine work, in social and pharmacological terms. Parallel to the types of decisions that patients and practitioners in Amdo make to ensure an efficacious outcome to a healing encounter, the Tibetan collaborators in the clinical trial research described by Craig put both 'religion' and 'science' to work, to the best of their resources and abilities, when they sponsor the *mendrub* ritual. And yet of note here – in contradistinction to the types of medical pluralism described by both Schrempf and Gutschow – is the maintenance of certain practical and epistemological boundaries around both the *mendrub* and the RCT. The performance of this ritual to help to ensure the efficacy of the Tibetan study drug, on the one hand, and infuse the placebo with some form of potency and benefit, on the other, was unaccounted for, even invisible, within the parameters of the RCT protocol. Yet it remained an important methodological and moral act for Craig's Tibetan colleagues. In addition, the *mendrub* put into relief other kinds of ritualized acts, such as the randomization processes, that are viewed as normative 'best practice' from a biomedical perspective.

Chapter 7

Between *Mantra* and Syringe: Healing and Health-Seeking Behaviour in Contemporary Amdo[1]

Mona Schrempf

Introduction

The referents '*mantra*' and 'syringe' in my title may serve as two general, iconic poles in a shared cultural logic of healing among Tibetan communities. Towards the 'religious' end of this spectrum, *mantra* may represent here the ritual healing practices performed by professional healers and patients. Syringe, on the other hand, refers to a 'scientific' biomedical technology commonly in use among Tibetans (and in rural China in general) that became the symbolic signifier for and hallmark of Western medicine and modernity. The term syringe is meant to indicate intravenous injections (IV) usually containing an antibiotic that are frequently used for all kinds of ailments.

The four case studies presented in this chapter illustrate how the pluralistic landscape of healing, inhabited by a variety of professionals and health-seeking patients in rural Amdo,[2] is comprised of a common matrix which I call a cultural logic of healing.[3] Rather than trying to postulate a structural or hierarchical model of resort, or focus upon a particular medical system or institution, I would like to lay out the spectrum of healing practices in rural Amdo-Tibetan communities and use my case studies in order to analyse the ways in which they are instances of situated choice making among patients and healers. I understand the cultural logic of healing as drawing upon 'networks of associative meanings [that] link illness to fundamental cultural values of a civilization' (Good 1994:55). It

seems that especially in times of complex and life-threatening illnesses this cultural logic of healing becomes particularly relevant for the patient, the family, and the immediate socio-cosmological environment. The need to restore meaning, through rituals, to these interdependent social relationships that are threatened by illness is part of this process. Furthermore, I think it is necessary to apply the '*sowa rigpa* sensibility' (as outlined in the introduction to this volume) to the way in which we think about the different types of healers and healing methods involved in health in Tibetan societies. This means that we put the diviner applying his Tantric powers to protective *mantra* or divination techniques in order to heal on a par with the doctor of Tibetan or Western medicine who might administer an intravenous infusion, prescribe herbal medication, or do both. It also means taking into account the health-seeking behaviour of patients that might be complex and variable, such as simultaneously taking both *mantra and* syringe as part of a complementary (and not a contradictory) treatment, that is equally effective on embodied individual, social and cosmological levels in which both illness and healing occurs.

As Geoffrey Samuel has suggested, when studying healing it can be productive to abandon traditional disciplinary categories (such as 'medicine' versus 'religion') and look instead at the 'mind–body–society–environment complex' (2006: 123). Yet, how can one approach this bricolage of health-seeking and healing methods, as well as contrasting ideas about health and illness? I argue that it is important to analyse case studies through the subjective viewpoints of both patients and healers, while at the same time considering the local socio-cultural context, including the plurality of healing practices and their overlappings. This problem has recently been addressed by combining studies of medical pluralism[4] with studies of body, self and illness experience (Johannessen 2006). Healers and patients are understood in terms of their subjectivity, meaning that their actions are conditioned by both external (i.e., socio-economic and political) as well as subjective factors, i.e., access to and availability of health care services, including a sufficient supply of medicines in a particular locale on one hand, and more individual factors such as financial means, education and profession, gender and social networks on the other. Situated choices will depend upon the type and severity of a disease, but also upon access to a clear professional diagnosis or helpful treatment, and sometimes on the certainty of no available cure at all. Yet once there is access, the relationship between patient and healer cannot be underestimated, since 'local social and cultural contexts and the

establishments of personal relations between healer and patient are of paramount importance in the realization of alternative rationalities' (Hunter 2001:153).

The complexity of health-seeking and healing practices in Tibetan societies has often either been overlooked – with the exception of medical anthropologists working specifically on medical pluralism for around the last decade – or analysed in an isolated way as an inclusive part of specific medical (or sometimes religious) systems. In addition to this, Tibetan culture and society, on the other hand, is deeply infused with a moral cosmology that beyond institutionalized religion concerns the fundamental relationship between humans and their bodies and the local environment in which deities are embodied and are directly responsible for the well-being of man. Furthermore, cross-system practices with potentially mutual appropriations of concepts and therapies are rather common in medicine, as the chapters in this volume demonstrate. Also, rural patients might not differentiate between different types of healers and their therapies or medical systems, as long as these are known to have 'efficacious' potential for the health problem at hand, are affordable, and are being practiced by someone trusted to be a good healer. This view of a common cultural logic in which subjective health-seeking, social relations and gender, private or institutional medical treatment, divination, *mantra*, as well as issues of *karma* and rebirth are all embedded, allows us to focus on the agency of the health-seeking subject that situated choice-making entails. It also cuts across disciplinary, professional and socio-political boundaries, thus rendering transparent the essentializing discourses that stress the oppositions of 'knowledge' versus 'belief', of 'science' versus 'religion' or 'biomedicine' versus 'Tibetan medicine'.[5] In the following sub-chapter, I will outline some of the more vernacular classifications and perceptions among Amdo Tibetans that pervade, and to some extend might structure, this cultural logic of healing.

Vernacular Classifications and Perceptions

While patients' understandings and meaning-making of medical diagnosis and treatment are certainly variable and different from (equally variable) expert knowledge of illness and healing, a more vernacular classificatory system for diseases and treatment methods is circulating among both lay and professional groups. It concerns major oppositions made between 'hot' and 'cold', and 'old' and 'new' diseases, as well as 'slow/smooth' and 'quick/harsh'

medical effects. 'Hot' and 'cold' is a common criteria for illness classifications across traditional Asian healing cosmologies, and one that is significantly also applied to biomedicine as well as food properties, and so on. For example, explanations of why intravenous injections (hereafter IV) help against a common cold (*chamba*) attributed this to their 'cooling' nature that quickly cools down and thus cures a 'hot disorder', such as a fever.[6] This idea is certainly related to the much more complex system of 'hot' and 'cold' classifications of both types of 'disorders' and the general property of *materia medica* in Tibetan medicine according to the *Four Tantras*, or *Gyüshi*. Thus, a particular 'hot' disorder is 'balanced' through the 'cooling' properties of a specific medicine (and vice versa). In popular understanding among Tibetans in Amdo it seems that this concept has been transferred to 'syringes' rather than to the particular medication – often antibiotics – they may contain and deliver; therefore, the device takes the place of the substance. Following this Tibetan cultural logic of hot or cold disorders, when it comes to the importance of maintaining a 'hot' state, such as in the case of pregnancy when the body must be kept warm, injections might be perceived as potentially dangerous to both the mother's health (including women in postpartum states) and the child's, because of the primary principle of nurturing, as well as recovery and well-being, being closely related to keeping warm at all times and the avoidance of anything cold.[7] In other words, biomedical treatments are also given meaning and understood through this vernacular classification that is part of the cultural logic of healing.

Another vernacular classification that I would like to highlight here concerns the distinction between 'old' or chronic and 'new' or acute diseases. This distinction is shared by both professionals and lay people. It appears to be based upon the perception that chronic diseases are slow and steady in their encroachment and persistence in the body, while 'new' diseases break out suddenly, and are fast acting. Accordingly, Western medicine is understood as a quick but potent fix for 'new' diseases, for example in the case of inflammation and fever (cf., Tibet Information Network 2002: 69), while Tibetan pharmaceuticals are used for 'old' (chronic) diseases since they are perceived as working slowly but thoroughly. In addition, Tibetan medicines are generally believed to be harmless for the stomach and to have no side effects. This makes them appropriate for long-term treatment and an alternative for biomedical drugs whose side effects are considered harmful in the long run.

As part of the vernacular classification of 'slow/smooth' Tibetan medicines and 'quick/harsh' Western medicines, IVs, as well as syringes

and injections in general, are taking on a special role. They are understood as being extremely potent and quicker in effect through their direct delivery of medications. Therefore they represent a better cure for 'new' diseases – that is, ones that erupt quickly – such as colds. Furthermore, their advantage is believed to lay in avoiding the usual 'harsh' side effects otherwise attributed to Western medicine, because the medicine is injected directly into the bloodstream and does not touch the perceived potential trouble spot for side effects, the stomach. Therefore, among Tibetans IVs have come to represent an ideal combination of a powerful and quick fix through Western medicine which avoids the worst side effects. This makes them an ideal symbol of modernity and scientific progress. On the other hand, modern medicines might be better at curing modern ailments. Doctors of Tibetan medicine frequently blamed 'modern Chinese food' that contains 'too much oil and chili' or too many artificial flavours and stimulants, and unclean and polluted foods (such as those recently attributed to 'bad' Muslim or Hui cuisine in Amdo) for the dramatic increase of stomach ailments among Tibetans. Nomads, so the argument goes, have less problems of this type since they have less contact with modern foods; their lifestyle is still considered as 'pure'. In any case, both on the grasslands and in farming areas Tibetans frequently parade in public with IVs attached to their arms as if displaying their modernity in this form of treatment. The last part of this chapter will deal with this phenomenon in more detail.

A Plurality of Healing Methods

In China today, the theoretical distinctions made in public health arenas and by different official representatives of biomedicine, Tibetan medicine and Chinese medicine alike, all belong to a global modern discourse that aims at legitimizing and professionalizing these systems and their medical practices by using biomedical standards. In contrast, ritual healing is not officially referred to as a healing practice and is segregated as 'superstition' (Chin. *mí xìn*; Tib. *mongdé*). Yet in practice, medicine and healing have not become scientized in every domain, as the existence of healing Tantrists (*ngagpa*) or diviners (*mopa*) or some traditionally oriented senior lineage doctors of Tibetan medicine demonstrates. This does not mean that they are not in contact with Western medicine. Rather, they mediate between their healing and biomedicine in relation to their patients, some of whom might receive the latter form of treatment (cf., Gerke, in this volume). Sometimes, biomedicine might appropriate 'religious' or rather ritual traits,



Figure 7.1. Village doctor (left) immunizing and *mopa* (right) preparing amulet in a private home.

often glossed as 'placebo effect' in the literature. For example, multicoloured biomedical pharmaceuticals might have a colour-based effectiveness and might be placed in front of an altar or Buddha image to ritually empower them and increase their potency before use.[8] This practice seems to be popular and pertains to a cultural logic of healing in which 'medicine' and 'religion' are intertwined and not juxtaposed. Sometimes, however, they just exist side by side.

In order to deal with difficulties in health-seeking or potentially expensive cases of medical treatment, a *mopa* or *ngagpa* is often consulted, even though such healing practitioners are officially marginalized and situated at the edge of the medical spectrum. Their patients might already use a variety of medicines that were not seen as being helpful or they might be seeking advice before embarking upon a new course of established medical treatment. Some seek protective amulets to avert bad luck or illness (also in the particular case of SARS, see Craig and Adams 2009). However, diviners are rarely acknowledged as healers in the medical anthropological literature even though they divine or 'diagnose' the causes of, and try to

prevent or directly heal, diseases and important matters of life and death in Tibetan societies by means of Tantric ritual.[9] They take on important social and healing roles in the health-seeking choices of rural Amdo Tibetans, as well as in other areas of social life. Thus, ritual healing has neither been eradicated by Chinese modernity nor by biomedical practice. It fulfils an important socio-cultural need for curing illness.

Within this medical pluralism one finds variations in the way in which 'religion' and 'medicine' are either treated separately, overlap or are combined. The responses to my inquiries by four different types of healing practitioners who are situated towards the *mantra* end of the healing spectrum might illustrate this point. Thus, a Tantric practitioner will emphasize that he does not heal with 'material medicine' (*men*), but rather through Tantric expulsion or protection rituals using *mantra*. A *lama* claims his healing powers come from the higher realms of the Buddhas but also conveys them through a variety of rituals (including purification, expulsion of illness causing evil spirits, prolonging life, and protection rituals). A diviner (*mopa*) can diagnose illness and prescribe the appropriate treatment or doctor through divination (*mo*) and/or by administering protective amulets for the patient. A monk doctor appears to perfectly embody 'medicine' and 'religion' in equal measures, through his very persona. Like other traditionally educated senior lineage doctors of Tibetan medicine (*menpa gyüpa*), he is usually trained in both Tibetan medicine and religion, yet to his patients he only administers 'material medicine' (*men*) and no ritual, despite the fact that his patients might trust him precisely because of his special skills in both medical and religious matters. Certainly there are different healing practices belonging exclusively to one of the two different domains of 'religion' and 'medicine', in training and expertise. Yet as particular practices they can be combined in various ways in both healing (cf., Craig on empowerment rituals of medicines, in this volume) and health-seeking behaviour; and they can also be contingent on the context and subjectivities of both healers and patients.

For example, a senior lineage doctor of Tibetan medicine whom I interviewed emphasized the importance of his own religious practice while at the same time he maintained a strict boundary between 'medicine' and 'religion' in his medical practice. The daily recitation of the Medicine Buddha (Sangyä Menla) invocation played an important role in his own purification as well as in his ability to diagnose correctly. Connections between doctors of Tibetan medicine and well-known medical and religious masters are often depicted on photographs in small private clinics



Figure 7.2. A monk doctor taking a patient's pulse.

or dispensary rooms. Such connections can involve initiations, empowerments, meditative as well as specific medical training in certain methods or local plant knowledge from various teachers outside of the institutionalized Mentsikhang arena. In one private clinic led by a monk doctor, next to such empowering photographs there was a separate shrine

room housing the statue of a powerful Tantric deity in front of whom patients would prostrate before seeking his consultation. In his dispensary room, however, an old barefoot doctor's bag and an official license for practicing as a township doctor were also displayed on the wall, attesting to his official public health care role. Such powerful symbols will certainly not escape a patient's attention and their combinations might also play an important part in healing. Yet, in public clinics or hospitals of Tibetan medicine public health policies and certificates of hygiene and professional achievements are icons of a different power demonstrating the public face of a 'scientized' and secularized Tibetan medicine.

Due to the intertwined socio-cultural, economic and political complexities and the situatedness of subjectivities in the practice of healing, the 'messiness' of all these parameters in both health-seeking behaviour and healing practices creates an analytical puzzle. Such parameters also condition the shifts in emphasis between available healing options and might, on one hand, depend upon the healer, the illness and the patient concerned. On the other hand, complex illnesses (those difficult to treat) seem to trigger multilayered etiologies that are connected with different cosmologies (the various 'medical' ones as well as various folk or institutionalised religious ones), that also pertain to different healing options. In particular in case of a life-threatening illness – and this might be something rather universal – all available and known healing treatments are drawn upon. Yet, more often than not, in rural Tibetan areas pragmatic concerns seem to override others. Such pragmatic concerns could involve local accessibility to certain types of medicines or the consultation of a 'good' (i.e., trusted) doctor, or the success or failure of a particular medical technique or system after an initial unsuccessful resort. It also might be limited by financial and social constraints or simply knowledge or lack of Chinese. Furthermore, trust or distrust in/or alliance with public health institutions, social networks – in particular the family – and also the type of disease will play important roles in health-seeking behaviour. On the other hand, rural practitioners are also constrained by certain limits, for example by the availability of medicines (Tibetan or biomedical), or simply the knowledge (or lack) of Chinese language that is indispensable in order to prescribe (or even read the instruction leaflet of) biomedical pharmaceuticals. It is no accident that the term for 'biomedicine' or 'Western medicine' is in fact called *jermen* in Amdo Tibetan, literally meaning 'Chinese medicine'. According to my field observations in Amdo/Qinghai, rural Tibetan patients rarely seem to seek out a particular

medical system for ideological reasons yet 'good quality' state biomedical institutions are connected with high costs for medical care. Besides this pragmatism, what patients are also guided by will be exemplified by the following case studies.

Diagnosis and *Mantra* as Therapeutics: Alag, the Diviner

As has already been highlighted, one of the key figures in important decision-making processes involving health and illness in rural Amdo is the *mopa*. In particular, in cases of uncertain and serious disease aetiology, patients will consult a diviner often after having tried various types of medicines in vain. His recommendation and advice is trusted, and usually followed, like a diagnosis or 'medical referral' representing the 'right' – that is, trusted *and* 'safe'– treatment choice. As we shall see in this first case-study, the diviner might both 'diagnose' through divination (*mo*) and heal through ritual means using *mantra* and protective amulets. Or, equally possible, he might advise a patient to go straight to a hospital for an operation and in addition perform a protective healing ritual (cf., Schröder 2008 for the Ladakhi context).

Diviners are usually male Tantric practitioners, whether lay persons or monks. They are able to 'diagnose' diseases that are of non-medical origin. They act as mediators between the realms of powerful Tantric and local deities, humans and evil spirits that afflict already vulnerable people or those who had previously offended the deities. In more complex cases of serious illnesses of unknown origin, diviners are often asked to advise the patient on the best choice of doctor, medical institution or the right healing practice. Alag, the diviner, whom I will discuss here, is a married Tantric practitioner, or *ngagpa*, in his early sixties, who belongs to an important religious lineage in Amdo. He is well known in his home area as a good *mopa* and is a respected person. I visited him in his son's modern apartment in a rural county town.

Alag sits comfortably on a brown imitation leather sofa with a rosary rolling in his one hand and a teacup placed in front of him on the large sofa table. During the entire time of my presence the phone is ringing. Alag's young and smartly dressed daughter-in-law picks up the receiver and forwards questions from clients on the other end of the phone, turning towards Alag: 'This is Nyimongtsho … Should she go to hospital or not?'

or 'Is this illness Tserang has got a serious one or not?' Alag responds within seconds to these 'yes' or 'no' questions, each time quickly consulting his *trengmo*, a divination method using a bead rosary, rolling it through his fingers counting the beads. He seems utterly relaxed and focused at the same time. Alag's divinatory skills are obviously in high demand, and they are cheap when it comes to such ordinary inquiries. His clients want to know about all kinds of things, whether a business venture or an exam will be successful, or if and when a journey should be undertaken. A big part of his job, however, concerns questions such as whether to take this or that medicine that was already given to a now doubtful patient, whether to take medicine at all or which doctor to go to, how long a patient's lifespan (*tsé*) will be (and therefore how much time there is left to live), and so on. All such decisions are important for health and illness, and sometimes they concern matters of life and death. Furthermore, the diviner's Tantric knowledge and power can directly heal people through ritual. His clients expect him to heal and/or to make the right choice of treatment, helping them to avoid potentially high medical costs or the unnecessarily prolonged suffering of a patient who is expected to die.

For example, in the case of Tserang's mother, a long-term cancer sufferer, the diviner was asked whether an operation would make sense at all. A thorough divination by the *mopa* and a consultation with a *lama*, both working independently of each other, revealed that Tserang's mother's lifespan was at its end and could not be extended, thus medical treatment and an expensive operation would not really help her, but would only extend her suffering. Tserang thus decided to take care of her mother at home. Since Tserang was a medical doctor – trained and experienced in both Tibetan and Western medicine for twenty years but officially only allowed to practice the latter as a state employed township doctor – she was able to handle this difficult task professionally. Her mother died after several months of homecare. Yet Tserang was deeply distressed when she told me about her doubts and started to cry while I interviewed her. Was this really the right thing to do or could her mother have been rescued by ignoring the diviner's advice and admitting her into hospital again? However, her brother, a non-medic with a deep interest in Tibetan culture and religion, seemed at the time more at peace with the divined 'fait accompli'. Both health-seeking and healing methods in this case demonstrate the bricolage of cultural ideas and values that condition the fluidity of the borders between the social and individual body and connect it to the 'religious' realm and a morally charged cosmology.

As for the concept of lifespan, mentioned above, Alag explains about it through the image of a butter lamp: the butter represents *tsé*, the lifespan, the wick represents *sog*, the life-force, while the flame represents *la*, the 'soul' or 'life-essence'. Whereas the life-force is connected to the quality of blood (*trag*) and consciousness (*sem*), Alag characterizes *dönné* (*gdon nad*), a spirit-inflicted illness, as a disease of the 'life-essence' *la*.

The lifespan, however, is conditioned in a *karmic* way, as it depends upon one's previous good or bad actions (*lä* or *karma*) and one's own morality; since it is not considered as a disease, it cannot be healed once it is exhausted, at least not by 'material medicine' (*men*). It is sometimes possible to extend the lifespan through ritual means, whereby one's improved level of merit (*sönam*), acquired and accumulated through virtuous and purifying deeds such as pilgrimage and sponsoring particular rituals, can overcome bad *karma* and lengthen one's lifespan. When 'material' medicine cannot help to remedy a particular disease or just to support it on a *karmic* level, ritual healing is the only other option. In serious cases it is believed best to do both. Thus it seems to be a rather pragmatic choice: if a family invests in a long-life ritual for a hospitalized family member, they may be hoping to extend the lifespan of the family member and increase good karma for a better rebirth at the same time.

Therefore, in this context, Alag is not just a diviner, he is also a healer. He is constantly dealing with difficult cases that could not previously be healed by medical doctors. Alag's speciality is to expel evil spirits, in particular those of deceased persons (*dré*) who can be extremely vicious and can possess people or make them sick, and other spirits (*dön*) which inflict illness upon weakened persons. Yet, in addition to diseases inflicted by evil spirits, he also claims to rid people of heart disease (*nyangné*) and liver disease (*chinné*). Rather unusually for an ordinary diviner, he studied the classical medical text of the *Four Tantras* (or *Gyüshi*) as well as astrology (*tsi*), and learned how to collect local medicinal plants properly. In cases of doubt, he utilizes his exceptional knowledge in medicine (*men*), Tantra and divination, diagnosing through Tibetan medical urine and/or pulse analysis and ritual divination in order to detect the cause of a complex illness. He points out – not without a certain pride – that most doctors of Tibetan medicine cannot do divination (*mo*), and thus might not be able to detect the real cause of a difficult disease. Yet, he is unable to practice 'material' Tibetan medicine due to the time required for the collection and production of his own medicines and due to the costs of purchasing medicines produced by others. It would be interesting to study and

compare how healers in other Tibetan communities might combine their various healing skills.

Although Alag is resourceful, he stresses that his 'medicine' is of a ritual kind: he specializes in producing protective amulets (*shungkhe*) as well as *mantra* (*ngag*) written on paper with special 'medicinal ink' which are kept in amulet boxes (*gau*) and worn around a patient's neck or upper body.[10] These written *mantra* are powerful spells, and are not only worn around the neck but also need to be eaten (*zayi*) in times of need, just like ordinary medicine.[11] This again reflects a sensitivity to what is considered as ingestion of 'medicine' in both ritual and medical contexts. On the other hand, Alag further explains that there are cases of illness that cannot be healed by 'material' medicine but only by 'spiritual' or ritual means (*kyebju*), such as by protective amulets. These can be used against everything threatening that ordinary medicine struggles with or is unable to heal: contagious diseases and epidemics, such as smallpox, as well as mental illness and other maladies. Alag can produce over a hundred different types of protective amulets using rare ingredients that are deemed to be effective, such as the blood of a murdered person, the blood of a leper, special animal fat, bone, tiger, leopard or lion's hair, elephant's gall bladder, and so on.

He explains that Tantric texts use a special coded language and that many ingredients are substituted by those that are easier to obtain and that are then ritually 'empowered'. *Mantra* written on paper or 'magic' diagrams printed on paper with a special ink can bring about the desired outcomes. Alag can also produce amulets in order to change the sex of an embryo (always from female into the socially preferred male to ensure partilineal continuity), to strengthen weak bodies, for good luck, against bad dreams, and for protection against poisons, infectious diseases and harmful spirits.

When I asked him about the efficacy of his healing, he – like most other Tibetan doctors and ritual healers I interviewed – emphasized that those who heal must be 'good at heart' (cf., Kloos, in press), obtain a proper education and possess training in their fields of expertise, whereas the patients' responsibility is 'to have faith' (*dépa*) in religion (*chi*). The increasing lack of 'faith in religion' (*chidé*) among many patients, he complained to me, decreases the power of his 'spiritual' medicine. In his view, times are changing rapidly, with a state-driven, secularized modernity infringing increasingly upon his healing practices, trying to render them ineffective. Still, his phone kept ringing throughout our interview. Unlike some of the more secretively operating spirit mediums, or young 'no-name' doctors of Tibetan medicine, he seemed nevertheless to be able to make a living out of his profession.

Engendering Rebirth: *Mantra*, *Karma* and Therapeutic Dreams

Lhamo is a thirty-four year old rural Amdo Tibetan woman who received a modern school education and now lives and works in a local county town. At twenty-seven years old, Lhamo first became pregnant rather late in life compared with most other Tibetan women.[12] She had not been able to conceive at an earlier time, despite her and her husband's efforts over the previous four years, which included ritual treatments to enhance conception. For some years, Lhamo had worn a special protective amulet which she had ordered from a Tantric diviner to ensure the birth of a son. Immediately after she had stopped wearing the amulet, thinking that she would not become pregnant anyway, conception occurred. Around two months earlier, Lhamo's twenty-one year old cousin, who was her dearest female friend, died in a tragic accident. Lhamo's aunt and uncle had expressed their hopes that their deceased daughter would be reborn to Lhamo as her child. The two cousins had been playmates and very close childhood friends, like two sisters. The death of Lhamo's cousin was therefore traumatic for the whole extended family. It was clear that only a rebirth of the deceased young woman within her family would be able to remedy the rupture and pain left behind by her sudden and premature death. Such a rebirth within the family was deemed possible because of the close connection between the two cousins, thus it would also reconnect both of their families again and remedy the tragic loss. Retrospectively, Lhamo connected her conception and pregnancy with her deceased cousin's will to be reborn as her child.

While pregnant, Lhamo had dreams of cutting long grass, the stalks of which continued to stand erect even after they had been cut. She dreamt of red apples, and of her dead cousin offering a large one to her. In her dream she bit into the apple, and after awakening she knew that her beloved cousin would be reborn as her baby. In another dream, her cousin appeared to her dressed in a long-sleeved Lhasa-style robe, carrying a bag with meat. Lhamo and her cousin's parents were also present in this dream scene, and they split up, but instead of following her parents, the cousin followed Lhamo, throwing little stones at her. 'Why don't you go to your home?', Lhamo asked her. 'Because I want to be with you', the cousin replied. After a long time, they finally reached Lhamo's house.

Lhamo eventually gave birth to a healthy baby girl. Nobody seemed surprised at the fact that her baby turned out to be a girl. It was obvious to

everybody that she was the lost cousin, her former best friend reborn. In the following years, Lhamo and her husband desired a second child. Her in-laws were eager for her to bear a son this time, officially her last chance due to the then exclusive two-child policy among minority farmers. The pressure was even more intense as none of Lhamo's husband's three brothers had yet produced a male offspring and the family lineage was in danger. Lhamo went to a famous Tantric specialist to get a powerful amulet made in the hope of ensuring the conception of a son. The Tantrist had a good reputation and was said to have produced the desired outcome in similar cases. For about a year she wore the amulet around her neck but, as had been the case before, she did not fall pregnant. She even went to visit a special temple of Dorje Phagmo some hours' drive away, because the circumambulation (moving around a sacred object) of the statue of a female Tantric deity hidden inside is believed to increase fertility. However, she still did not become pregnant. Then she stopped wearing the amulet, believing that she would not conceive a second time.

Sometime later, Lhamo's great-aunt had a stroke and lay in bed before she passed away, repeating again and again that she wished 'to go home' to her natal place, the same village that Lhamo comes from. After the great-aunt's death, Lhamo became pregnant once again. At that time, her sister had a dream that Lhamo would wear her hair in the old traditional style of women from that village, three plaits of hair woven together ending in one single one. The dream was interpreted as a sign that Lhamo's great-aunt might be reborn as her forthcoming child. Lhamo had morning sickness during the first three months of her pregnancy, and only when she knew she was pregnant did she begin to wear the amulet again.

As with her first pregnancy, Lhamo went for regular prenatal checks at the prefecture hospital and also had an ultrasound scan at the family planning centre. Lhamo assured me this was in order to make sure of the baby's health rather than to identify its sex. Doctors would 'never' tell parents the baby's sex anyway, and an abortion was out of the question for her. Neighbours and friends commented on the shape of Lhamo's pregnant belly, saying that it was a typical 'boy shape', slightly pointed and more pronounced on the right side. She was hopeful for a boy, but her husband reassured her that he did not mind whether the newborn was a boy or a girl.

The night before her delivery, Lhamo dreamt of her great-aunt knocking at the window of her new house. When Lhamo opened the window, her new house turned into her old one, and her great-aunt's husband came walking across the old courtyard just as he used to, carrying a loaf of bread with a big hole in it under his arm,[13] while bundles of hay fell onto the ground.

In case of any complications, Lhamo decided to give birth at a large hospital in the provincial capital where she personally knew a female doctor at the maternal health and childcare centre whom she trusted and who was then on duty. When the daughter of the deceased great-aunt came to visit Lhamo in hospital during the week following the birth, she pointed out that the newborn baby girl had bluish-coloured ankles, at exactly the same spot where her mother had had identical markings before she passed away. This was viewed as yet another sign that Lhamo's new baby girl was indeed her reborn great-aunt. While Lhamo's husband seemed at ease and happily accepted that he was now father to a second daughter, her father-in-law was markedly distraught, blaming Lhamo for 'cutting the family lineage' (*gyüchö*) which had reliably produced sons 'since two-hundred years'.

In retrospect, Lhamo argued that the amulet that should have procured a son probably did not work since she had begun wearing it again only when she was well into the third month of her pregnancy. This was after she knew that she was pregnant and after the Tantric power of the amulet was supposed to be able to change the embryo's sex into a male. She considered that due to *karmic* reasons the amulet worn by her the previous year might have hindered her from becoming pregnant altogether. Also, the rebirth of both her beloved cousin and her great-aunt was attributed to their *karma*, i.e., their own strong wish to be reborn as Lhamo's children. This is how the dreams that appeared to Lhamo just before conception and during pregnancy were retrospectively interpreted. Consequently, she could not be blamed for giving birth to baby girls twice since it had been due to their jointly connected *karma* (*tendré*). Last but not least, this case demonstrates how both *karma* and ritual are perceived as efficacious since each came into play at different times, and each contributed in different and unexpected ways to the then accepted outcome.

Lhamo's health- or rather help-seeking behaviour (in the widest sense of 'healing' the male lineage by reproducing the patrifilial ties of her in-laws) exemplifies pragmatic, situated choices and meaning-making: her resort to a Tantrist and wearing a protective amulet understood as a direct intervention to give birth to a son by ritually influencing the sex of the embryo to be male; the biomedical check-ups and birth at the hospital to ensure her physical 'safety'; the explanation of the failure of the amulet and ritual means in terms of *karmic* forces winning over socially appropriate gender issues (i.e., having at least one son among the two children allowed to rural Tibetan women); and finally the closure or 'healing' discourse on the socially accepted assertion of *karma* reuniting deceased family

members with the living (for a similar case of karmic rebirth in a nomadic family see Chope Paljor Tsering 2004, chapter 1).

Between Life and Death

Gyalbo was once a man of great reputation. People say that during his ten years in office as a village leader, village members were undivided in their efforts to strengthen the social importance of the local mountain god temple and thus ensure the well-being of the whole community. This harmonious situation changed quickly after he retired from office. When I met Gyalbo's grandson at his home for the first time, a group of about ten Buddhist monks were reciting prayers from the ritual text *Thousand Offerings to the Medicine Buddha* [*Sman bla stong mchod*] for Gyalbo's benefit since he had just been delivered to the provincial hospital about 250 kilometres away due to acute abdominal pain. Then in his late sixties, Gyalbo's previous examination at a prefecture-level hospital had yielded no definitive diagnosis of his complaint. Neither the biomedical drugs nor the Tibetan medicine he had taken at the same time and over a prolonged period had offered any relief. Gyalbo's family had invited monks from the local monastery to their home already, at least four or five times. The rituals were performed in order to help with Gyalbo's worsening condition, and each time the family fed the monks and paid them a total of around 1000 Yuan. Finally, a diviner was consulted. He advised that Gyalbo should be sent to the provincial hospital where he was eventually diagnosed with stomach cancer.

A biomedical doctor, who was a friend of Gyalbo's family and shared the same hometown (*phayü chigpa*) with him, explained the diagnosis to both Gyalbo and his brother, and informed them that even if Gyalbo did get better after the recommended operation he would probably die soon. Gyalbo's wife was not informed in order to spare her the distress as long as possible. The family then spent about 40,000 Yuan on an operation to have Gyalbo's cancer removed.[14] After he returned home from hospital, a relative recommended a particular mineral spring whose waters were considered to specifically heal stomach problems. Despite the operation and drinking the potent water of the healing spring, Gyalbo's condition did not improve. Even when Gyalbo's daughter-in-law obtained a particular Tibetan precious pill (*rinchen rilbu*) from a nearby monastery, for a cost of around 1000 Yuan, it failed to improve his condition. During the mountain god festival, Gyalbo asked the spirit medium (*lhapa*) to perform a divination for him (two wooden sticks were

used), in order to find out on which day he should go back to the hospital. He left the festival soon after, and passed away several days later.

The above cases are all examples of the *mantra* end of the Tibetan healing spectrum and its relation to other forms of illness concepts and healing therapies. I will now turn to the use and meanings of 'syringe', which, although situated at the other end of the healing spectrum, still supports certain ritual aspects, this time of the healing power of modernity.

Injecting Modernity

It is most likely that between the 1920s and 1950s the first syringes were introduced into rural Tibetan areas of Amdo and Kham with the occasional visits of Western missionary and Chinese doctors. They performed surgery with 'knifes' and deeply impressed some Tibetans (cf., Shelton 1923). Syringes and their quick results in eliminating fever and inflammations were used as a way to gain trust among the population, for example, in order to convert them to Christianity. During the 1940s, injections given via hypodermic needles were apparently still novel, and accessible to only a few Tibetans, in particular the well educated elite in Central Tibet. Yet, they were already in high demand (cf., McKay, in this volume). However, the majority of Tibetans had never encountered biomedical technology prior to the mass immunization campaigns of the Chinese state performed by barefoot doctors during the early 1950s.[15] Administering medicine via injection at that time became an important – if not initially the only – part of a barefoot doctor's biomedical training, as was the case among some doctors of Tibetan medicine who had been rehabilitated by the end of the 1970s and who became employed by the government as township doctors. Finally, by the late 1980s, Western medicine became an integral part of Tibetan medical training through state medical colleges and hospitals. Apart from their visibility, the widespread acceptance of injections and antibiotics among both contemporary Tibetan patients and healthcare professionals is perhaps further indicated by the fact that one rarely hears a cautious word or reservation about their (over)use in general, and that everybody assumes that they help. Even a well-known doctor of Tibetan medicine whose hand-made medicinal powders and pills were in high local demand, gave his son an IV for a cold rather than his own medicine.

Sydney D. White emphasizes that medical techniques (as well as pharmaceutical substances and even some specific medical theory) can easily be detached from their original matrix, and can be incorporated into any officially acknowledged medical practice as long as these could be

represented as 'scientific'. She states that in Yunnan 'injections of antibiotics were viewed as [an] integral part of all four official practices', among them Western or biomedicine, Traditional Chinese Medicine (TCM) and Naxi therapeutic practices since they are all part of the '"scientizing" legacy of the Maoist period', in short, of Chinese modernity (2001: 182). In other words, to have an IV administered means to take part in modernity, to be able to demonstrate this to others and thus become – at least temporarily – modern.

In rural Tibetan areas of Amdo, as in rural China in general, IVs are normally administered either by doctors (regardless of the medical system within which they normally practice) or by pharmacists. One comes across patients with IVs attached to their arms in small clinics, hospitals, pharmacies or sometimes in peoples' homes, as well as in public places. In clinics, patients are often lined up one after the other on a bench or in a bed, each with a drip-bottle hanging from the adjacent wall. In most cases, antibiotics or combined preparations which contain them are being administered by way of IV. This very common use of IVs in rural Tibetan areas stands in stark contrast to widespread criticism in the West about the overpowering side effects of IV administered antibiotics and the dangers of Heptatis B and HIV contagion through unclean needles. Yet, it might also reveal that the 'belief' in modernity can at times have a powerful healing effect.

The great popularity of IVs and syringes in general in Tibetan areas attests to an unbroken belief in the efficacy of modern science and technology. When asked, doctors of both Tibetan and Western medicine claimed that patients would demand to be given IVs. Yet when I questioned patients, they would state the opposite, sometimes complaining about the costly price of 'this kind of medicine' – usually antibiotics. However, mostly patients did not even know the name or type of medicine dripping into their veins. It seems that doctors can make lucrative profits by selling IVs to their patients at a higher price than they paid for them, with their government subsidies, and this by means of officially diagnosing a case of 'pneumonia', for example. The average price for one infusion was about twenty Yuan per bottle; used three times a day for a period of three days (as is usual), this added up to 180 Yuan, which is quite a considerable amount for poor rural Tibetans. The number of pharmacies and small clinics in the prefectural town of Rebgong prove that there is a strong demand. An IV drip inserted into a person's arm also embodies a powerful visible symbol of 'modernity'.

On one hand, IVs are often used for treating minor problems, such as colds and flus, or any kind of inflammation or 'fever'. Despite the fact that

traditional Tibetan medicine could help with these diseases, IVs are believed to do a better job and in particular to deliver a quicker result. One doctor told me in a serious tone that IVs would probably still 'work' even if they only contained vitamins or glucose, hinting at their 'placebo' effect. Yet patients (and some of the doctors) explained the effectiveness of IVs rather by way of what they do directly and in particular what they actively



Figure 7.3. A daughter holds up her mother's IV drip.

avoid – a quick delivery of some potent medicine that bypasses the stomach, known as the most sensitive trouble spot for side effects among Amdo Tibetans (on the latter cf., Sabernig 2007: 64f).

On the other hand, the use of IVs is not completely without perceived dangers. I heard of several instances where pregnant women, after having received 'cooling' injections administered by doctors to treat a minor health problem, retrospectively blamed the 'injections' for a sudden miscarriage following the treatments.[16] Here, IVs seem to embody a threatening state modernity, a diguised form of forced family planning practices that are, in various guises, also occurring in rural Tibetan areas of Qinghai (cf., Schrempf 2008).

More often, however, IVs almost turn into 'wellness' items, as a kind of reward after hard physical work, for example, after childbirth, and after the arduous work of harvesting caterpillar fungus in the high mountains. Doctors state that people (farmers in particular) get sick in the high mountains since they are not used to sleeping outside in the cold and wet climate and at such high altitude.[18] IVs, in short, are emblematic for a 'quick fix' form of modernity. They are easily accessible and easy to employ and transgress the professional boundaries of medical systems.

Conclusion

The ethnographic case studies discussed above exemplify the broad spectrum of healing between *mantra* and 'syringe' and the situated choices made by patients and healers which exist in contemporary Amdo Tibetan society. A divination performed to decide upon a medical treatment in a hospital, a ritual for healing, reciting prayers or wearing amulets empowered by *mantra* to procure a son, narrating the healing powers of *karma* and dreams in order to heal the irreversible breach of a family lineage, as well as believing in the immediate powers of IVs to treat common colds by understanding modernity through Tibetan medical concepts – all these practices are part of a common and complex cultural logic that informs peoples' choices. Illness can affect all levels of the body– the individual, social, environmental and cosmological– even though one might need at times more attention than the other. In times of crisis and depending on the local situatedness, to cover all options and levels at the same time might be simply the most efficacious. Therefore, *mantra* and 'syringe' do not exclude each other, and ritual healing can play an equally

important role in patients' health-seeking behaviour alongside the influence of institutionalized medical practice and public health policies.

In conclusion, it is obvious that neither biomedicine nor 'science' have displaced local healing practices among Amdo Tibetans more than half a century after their systematic introduction by the state. Local healing practices and healers can indeed provide a 'missing link' which fills an important social gap in the rural public health system in China – an affordable, trusted and meaningful health decision-making service that is both culturally sensitive and accommodates Tibetans' own concerns about health and illness (cf., Schrempf 2007 for the medical landscape in rural Nagchu, TAR). I have also tried to demonstrate that different healing services and medical treatments are not used to the exclusion of each other, but are often resorted to simultaneously or in a complementary manner. Such pragmatic and multiple layered choices in health care are part of a cultural logic that reconnects the sick person with the fundamental framework of cultural values in a moral cosmology within which the patient regains agency. The health-seeking choices that were discussed here aim not only at restoring health in the body but at restoring the disrupted social relations caused by illness, i.e. between the sick person and his/her family and wider community, and with the immediate environment that is imbued with socio-cultural values. On the other hand, the case studies reveal that technologies of healing – no matter what their provenance – are founded on socially learned, and to some extent, fluid experiences of body and self. And where both *mantra* and 'syringe' fail Tibetans, the inexorable power of *karma* compensates for the ensuing disappointment and suffering.

Notes

1. I would like to acknowledge the indispensable help of all my informants and local interlocutors who need to remain anonymous. All names used in this chapter are pseudonyms. I would also like to thank the German Research Foundation (DFG) via the Cooperative Research Centre 'Representations of Social Order and Change' (SFB 640) at Humboldt University Berlin, Germany, for providing me with a research position and fieldwork funding. I thank Karénina Kollmar-Paulenz and Jens Schlieter and students at the Institute of Religious Studies, University of Bern, Switzerland, for the fruitful discussion of this chapter in its earlier form as a paper given at their institute. Last but not least, my heartfelt thanks also go to Vincanne Adams, Sienna Craig, Heidi Fjeld, Ivette Vargas and Toni Huber who provided me with valuable comments and the latter, as always, with careful editing on earlier drafts of this chapter.

2. Even though it is likely that my findings are similar to those found in other Tibetan societies outside of present-day Amdo (i.e., Kham, the TAR and Tibetan areas of the Himalayas), I am referring mainly to my fieldwork site (between 2005 and 2007) of Rebgong County (Tongren Xian, Huangnan Prefecture) in Qinghai Province. Tongren is both the county town and prefectural capital and thus the location of Huangnan Prefecture's three big hospitals which serve the surrounding farming and nomadic communities in four counties: Huangnan Prefecture Peoples' Hospital, Disease Control Centre Hospital, and Hospital for Tibetan Medicine. In addition, the number of private and semi-private clinics, as well as pharmacies selling biomedical and Tibetan medicine, has mushroomed in this town during the past twenty years. In contrast, remote rural township clinics are usually poorly equipped with medicine and are avoided by those who can afford better and more expensive healthcare elsewhere, with the best medical care being available in the provincial capital of Xining.
3. I use the term 'healing' in the broad sense of 'therapeutic practices that are embedded in local social relations and forms of embodied experience' (Connor 2001: 3), that is, practices which are exercised by a variety of professional healers and also involve the patients' health-seeking behaviour and the socio-political environment. I use the term 'healer' for the following professionals: a doctor (*menpa*) of Tibetan medicine, Western medicine or both, a Tantric practitioner (*ngagpa*), a *lama* (who might also know astrology, *tsi*), a bonesetter, a diviner (*mopa*) or a spirit medium (*lhapa* or *lhamo*).
4. According to Csordas, in 'any complex contemporary society' medical pluralism exists in form of multiple alternative therapies which may be related in four fundamental ways – contradictory, complementary, coordinating and coexistent (Csordas 2006: ix). In Ladakh, for example, Schröder (2008) witnessed a healing trance session by an oracle who, after sucking 'the illness' out of a patient's body, advised the patient nevertheless to go to a hospital for surgery for the same health problem. This might in no way diminish the oracle's success in having treated the illness on the socio-cosmological level by restoring the balance between patient and community, between the microcosm of the body and the macrocosm embodied in an environment inhabited by local ambivalent deities and malevolent spirits.
5. See also Garrett (2008) on the historiography of Tibetan medicine and the changing relations between 'medicine' and 'religion' in Tibetan literature. Parkin, who analysed Islam and healing in Zanzibar, speaks of historically changing yet generally close relations between religion and medicine and an 'intertwining' rather than 'merging' of the two (2007: 194, 217).
6. Interestingly, in South Kanara (India) Nichter reports the opposite ideas about IVs that are perceived as 'heating' the body (1980: 230). This points to a different cultural understanding of the effect of IVs on the body.
7. These ideas might explain in part the traditional custom among postpartum Tibetan women of avoiding washing (i.e., touching cold water) and the consumption of 'cold' food, such as fruits or cool drinks for at least the first month.

Following a similar logic, a doctor of Tibetan medicine explained to me that IUDs – the most common contraceptive method – are 'not good' for women to use because of the inherently 'cold' nature of 'metal' (i.e., copper) that can cause an imbalance, such as an inflammation, in the womb.

8. This was mentioned to me by a biomedical doctor working in a provincial hospital and whose father was a rural doctor. The latter found that if pills were multicoloured (in contrast to traditionally brown coloured, ordinary Tibetan pills), and were placed in front of an altar, patients reported improved results (cf., McKay, in this volume, Welch 2003). However, the 'placebo' effect of coloured medicines might also be linked with the use of jewel pills in Tibetan medicine, which are regarded as especially potent and sold at a high price, and which are wrapped in colourful pieces of cloth (for further notes on the complex issue of 'placebos' see Craig, in this volume).
9. Exceptions are the works of Parker 1988 and, in particular, Gerke 2008. Her dissertation on Tibetan concepts of temporality and lifespan among Tibetans in Darjeeling provides interesting ethnographic data and theoretical considerations about the relations between divination and medicine.
10. *Shungkhe* or *shungde*, literally 'protective knot', are ritually empowered strings into which a protective knot has been tied. According to Alag, there are two general kinds of *shungkhe* (each one having many varieties): those according to the Tantric texts of the *Golden Circle of Jamyang* (*'Jam dbyangs gser 'khor*); and those of the *Dakinis's 100 protections* (*Mkha' 'gro'i srung brgya*). Alag admits that a veritable business has arisen with *shungkhe* that are sold over the counter in shops. He commented on them diplomatically: 'I am not sure if they are effective though.'
11. I was given such an edible *mantra* as a gift by a Tantric diviner in 2006. He told me to eat it when I encounter difficulties or feel unwell. See Frances Garrett's forthcoming article, 'Eating Letters in the Tibetan Treasure Tradition', which deals with the literary sources for this healing practice. Because of their ingredients, Garrett calls these 'edible letter spells' 'recipes', containing musk, aconite, blood, etc. These are used not only against certain diseases but also for religious practice.
12. Even though birth is certainly not considered an illness, pregnancy and birth have become increasingly medicalized through biomedicine (cf., Gutschow in this volume) and have always been phases of enhanced vulnerability for mother and child. In contrast to the statements by Kim Gutschow made in the following chapter on birth 'pollution', I found no explicit concerns among Amdo Tibetan women about them being 'polluting'. The time of postpartum rest was considered in a positive way, and it was 'outsiders' who needed to cleanse themselves of 'pollution' or 'evil spirits' before entering the house in which a mother and newborn child maintain postpartum residence for – ideally at least – three to four weeks in Amdo farming communities.
13. In this part of rural Amdo, a newborn baby's name is traditionally called out through the hole of a home-baked loaf of bread on the seventh day following birth. To bake bread with a hole in it for someone else carries connotations of both

fertility and sex, as do bags with meat which are usually brought home by husbands for their wives to cook. In a well-known joke, a husband returns home late at night but in the darkness he confuses his mother with his wife. When the mother opens the door, he hands over the bag of meat, and says 'Look, darling, I brought a bag of meat specially for you' (meaning he wants to have sex with her). This joke always met with much laughter among Tibetans.

14. Forty per cent of these costs were covered by a health insurance scheme at that time since Gyalbo held an official local government post. Nevertheless, the family had to sell some land in order to cover the overall costs for the grandfather's treatment.
15. In any case, it remains to be examined how widespread these initial biomedical practices actually were in Tibetan areas of China. On his 1948 expedition through Golok, Clark reported on what he considered 'the first medical work ever attempted among these remote tribes' (1955: 241). Some 'medicos' trained in Western medicine tried to lure about fifty Golok warriors into a fort for vaccination: 'When the needles glittered near their bare arms, there was a howl sent up to the gods, and before we knew what was happening, they had swarmed up the ladders to the battlements and dropped twenty feet down to the ground, grabbed their stacked rifles and rushed through the gate in the outer wall' (Clark ibid.). I thank Bianca Horlemann for pointing out this reference to me.
16. Next to IUDs, the next common contraceptive is administered by injections every three months. In general, the WHO explicitly warns of unnecessary drug use and overdosage: 'An estimated two-thirds of global antibiotic sales occur without any prescription, and studies in Indonesia, Pakistan and India show that over 70 per cent of patients were prescribed antibiotics. The great majority – up to 90 per cent – of injections are estimated to be unnecessary' (cited from the Summary in *The World Medicines Situation*, WHO 2004 (http://www.who.int/medicinedocs/en/d/Js6160e.10, retrieved on 20 October 2008).
17. Unfortunately, the rise of Hepatitis B and Hepatitis C infections, as well as STDs (and potentially AIDS), in Tibetan areas of China might be directly connected to the overuse and unsafe re-use of needles and syringes. Few biomedical doctors that I interviewed had been critical about this issue. But those who were also cited the danger of overdosage while immunizing children and of transmitting infectious diseases through unclean syringes. I once witnessed a barefoot doctor immunizing a young child at his natal home and then throwing the used syringe carelessly onto the roof of the house. Problems with the unsafe use of syringes are well known in developing countries worldwide, yet they are rarely addressed among local medical personnel (Drucker 2001, Nichter 2001).

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Chapter 8

From Home to Hospital: the Extension of Obstetrics in Ladakh[1]

Kim Gutschow

Introduction

This chapter examines the extension of biomedical obstetrics within the Ladakh region of the Indian Himalaya. More particularly, it looks at the factors that both promote and constrain the shift of birth from home to hospital in Ladakh. My preliminary findings suggest that while there has been a marked increase in the number of hospital births in Ladakh in the last two decades – greater than the Indian average – home births continue to be popular in many parts of rural Ladakh. Certain factors promoting hospital birth are unique to Ladakh, namely the presence of motivated and charismatic doctors who, although they originate from the Ladakhi community, received their training at some of the finest institutions of Indian medicine. Yet many factors seen in Ladakh hold true for other parts of rural India, such as the desire to appear modern, the unfailing belief in the benefit of hospitals and their attendant technologies, and the greater value placed on each birth in a context of lowered fertility (Chawla 2006, Van Hollen 2003a, Van Hollen 2003b, Pinto 2008, Wiley 2002). Nevertheless, interviews with women across Ladakh confirm that home births continue to hold a strong appeal, not only because they privilege the agency and experience of the mother, but also because they obviate the substantial economic and psychological costs that hospital births present. Furthermore, discourse does not always reflect actual practice so that it is not unusual to find women who may aspire to but not achieve a hospital delivery.

In Ladakh, as elsewhere in the Himalayan and Tibetan realms, Buddhist women and their families negotiate and navigate among the competing

rationalities of biomedicine, Tibetan medicine and Buddhist ritual.[2] Overall, my research suggests that biomedical discourse has displaced rather than replaced both Tibetan medical and Buddhist discourses on birth in Ladakh. In other words, women and their families continue to employ both biomedical and Buddhist narratives around childbirth as each offers valid explanations for disastrous or dangerous deliveries. While obstetric discourses offer explanations such as obstructed labour or postpartum haemorrhage to account for maternal and neonatal demise, Tibetan medical and Buddhist discourses explain such misfortunes as the result of ritual pollution, negative wind or demonic spirits that can be purified or ameliorated through herbal and/or ritual treatments. Both biomedical and Buddhist experts provide their female clients the promise of limited protection and nearly unlimited meaning-making in a climate of shockingly high infant and maternal mortality.

My ethnographic research in listening to women describe their choices around childbirth grows out of the trend towards applying participatory types of ethnographic research and analysing the broader structural constraints that crucially limit women's efforts to pursue health-seeking behaviour (Inhorn 2006). It also builds on a broader effort in maternal health discourse to understand how both the supply of and demand for biomedical interventions or facility-based obstetric care interact. In other words, this essay seeks to explore the subjective factors such as women's experiences and motives as well as the broader social and demographic factors that structure the choices available around childbirth in India. Several maternal health experts summed up two decades of maternal health policy and research by arguing for a shift away from global policy and towards local implementation as follows (Freedman et al. 2007: 1384):

> We are not advocating a single universal approach to implementation, but neither are we suggesting that every situation is so unique that it has to start from scratch. In short, we know what to do, but how to do it varies by context. Understanding context entails an appreciation of the relation between supply and demand within the district level health system – i.e., the continuum from home or community, up through health posts and health centres, to the first referral level facility.

The noticeable shift from 'what to do', to 'how to do it', as well as from supply to demand, implies a recognition that any intervention must consider both women's choices in accepting or rejecting the given intervention as well as the surrounding cultural, social and political

contexts within which strategic choices are negotiated in both public and private. This policy statement also recognizes the continuum from home and community to local health centres and other biomedical institutions, each populated by individuals with disparate degrees of authoritative knowledge and power around childbirth (Davis-Floyd and Sargent 1997, Jordan 1993). In short, while still displaying the hubris of the policy expert ('we know what to do'), the statement admits that universals have failed and that it is time to recognize local contingencies and cultural context. As an earlier essay in the *Lancet's* Maternal Survival Series argued: 'Ensuring the availability of a package of effective intrapartum interventions in health facilities does not guarantee an effect on maternal mortality, which is contingent on uptake by the target population, the quality of implementation, and the avoidance of harm introduction' (Campbell and Graham 2006: 1292). After pouring billions of dollars into the construction of clinics and the provision of intrapartum services across the developing world, policy-makers recognize that the demand and the desire for such services is as critical as their provision.

More significantly, maternal health experts realize that they must provide services of sufficient quality and minimal harm to generate increased demand. Yet this assumption belies an underlying positivist belief in progress that somewhat elides the complex socio-cultural or psychological factors that may drive or derail what is hardly an uncomplicated process of 'uptake'. Moreover, as our study in Ladakh shows, the degree of 'uptake' by a given 'target population' is contingent on local social or cultural contingencies that remain largely outside the purview of many policy frameworks. Yet our study does bear out the finding that the quality of care, avoidance of harm, and factors of both demand and supply in the home and community have influenced the steady growth of institutional birth across Ladakh.

This essay builds on previous research on birthing practices among Tibetan Buddhists in the modern TAR (Tibetan Autonomous Region), historic Tibet and among exile Tibetans in India. While the research in the exile community and historic Tibet has concentrated on the rites and beliefs around conception, pregnancy and childbirth, research in the TAR has examined the policies around safe motherhood, interventions for postpartum haemorrhage, and the difficulty of translating evidence-based medicine and randomized controlled trials (RCT) into Tibetan medical culture.[3] This essay explores the changing nature of birthing practices and patterns in the Indian Himalayan region of Ladakh over the last two

decades. It aims to provide a diachronic perspective across both time and space, in examining the shift of birth from home to hospital across the rural countryside and in the urban area around Leh city

Slightly smaller than Norway but home to roughly 270,000 people, Ladakh accounts for half the area of the Indian state of Jammu and Kashmir but only a fraction of its population.[4] After 1979, Ladakh was split into the Buddhist majority Leh district and the Muslim majority Kargil district, each of which is served by a single district hospital. With an area of roughly 7,000 square kilometres – slightly larger than Delaware – the Zangskar sub-district comprises more than one half the area of Kargil district while its population accounts for only one tenth of the district's population. Zangskar is ninety-five per cent Buddhist, Leh district is over eighty per cent Buddhist, and Kargil district is more than eighty per cent Muslim. By 1995, more than half of all births in Leh district took place at the hospital, while only a fifth of all births in India were in hospitals in this era (Jejeebhoy and Rao 1995, cited in Van Hollen 2003a: 56). The Ladakh region has some of the lowest population densities and fertility rates in the nation. With a Total Fertility Rate (TFR) of 1.3, Leh district ranked lowest in fertility of all of India's districts in the 2001 census, while the nearby Kargil district had a TFR of 3.4 (Guilmoto and Rajan 2002: 668). Because the total population of Buddhists and Muslims in Ladakh are nearly identical, political and religious leaders have made family planning and abortion highly controversial and politicized topics (Gutschow 2006).

The Shift to Hospital Births in Leh

The shift of birth from home to hospital in Leh district in the last three decades has been dramatic, particularly for such a rural and remote part of India. When the government completed the Sonam Norbu Memorial Hospital (SNMH) in 1980, it was the only hospital to serve Leh district. The first year, there were only 114 births but by the next year, the number had doubled and it grew steadily over the next decade.[5] By 1995, nearly half of all births in the district were at the government hospital. The number of hospital deliveries rose every year until they reached 1241 in 2003/04, when Dr Lahdol, the chief obstetrician who had been at the hospital since its founding, retired. When Dr Lahdol opened an obstetric clinic at the nearby private Mahābodhi Hospital in Leh, she drew some of her devoted clients with her, as the dip in births at Leh District Hospital between 2003 and 2005 indicates. However, after Dr Lahdol retired in late 2006 and her niece, Dr

Padma, became the new chief obstetrician at SNMH, the number of hospital births rose again as expected. When Dr Lahdol retired from the Mahābodhi Hospital in late 2006, the hospital promptly closed its obstetric ward.

Dr Lahdol's reputation spread into the neighbouring district of Kargil, as in 2006 one fifth of all women in Zangskar travelled to SNMH to deliver their babies. These Zangskari deliveries accounted for ten per cent of the deliveries at the hospital in early 2006 according to my estimates.[6] While 74 per cent of all deliveries in Leh district were institutional by 2007, only 45.5 per cent of all deliveries in Kargil district were institutional that year.[7] The inexorable rise of institutional births here and elsewhere across India is expected to continue as the Government of India launched the *Janani Suraksha Yojana* (JSY, or 'Save the Mother') initiative in 2005 to promote institutional births in an effort to reduce maternal mortality (Government of India 2005). The scheme, which was widely promoted on the radio and other media outlets in Leh district, offers women who deliver in hospitals or clinics a modest sum of 1400 Rupees. It was plagued by bureaucratic complexity and initial controversy over provisos that mothers without marriage certificates or BPL (below poverty line) verification, as well as those having home births, did not qualify for the benefit. Although these provisos were overturned by 2007, a nationwide survey concluded that less than half the eligible women across India had benefitted from this

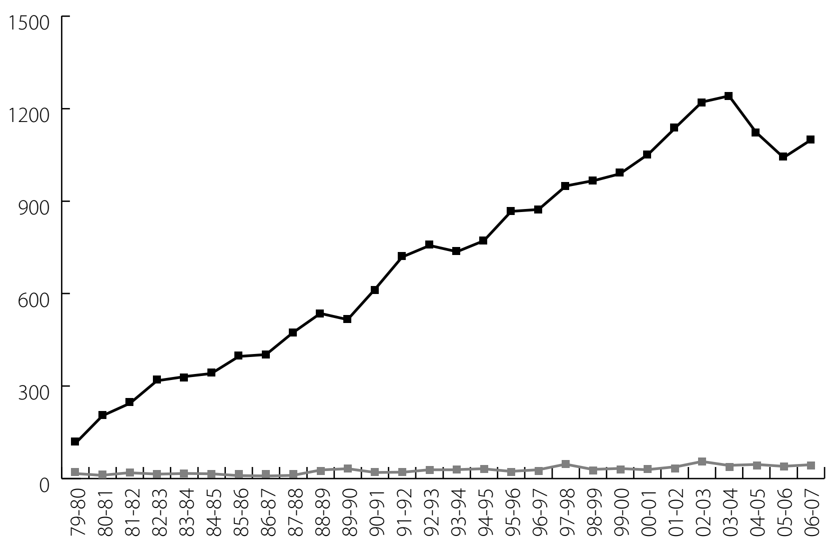


Figure 8.1. Deliveries and stillbirths at Leh District Hospital: 1979–2007.



Figure 8.2. The delivery room in Leh's government hospital. (Note the table and stirrups in the foreground, the baby resuscitation tray in the background, and the electric sterilizer tray against the right wall.)

ambitious programme (Nanda 2008). By 2007, half the women who gave birth institutionally in Leh district had benefitted from the JSY scheme (Government of India 2007b). In Kargil district by contrast, the programme was just being introduced in 2006 and there was no data on how many deliveries benefitted from the JSY scheme in 2007. During a training session I observed in Zangskar, the medical bureaucrats who presented the programme seemed nearly as confused over its particulars as the midwives they addressed.

Many women go to the Leh hospital to deliver because of its access to critical technology or techniques unavailable in the home birth setting. These include the capacity to perform emergency caesareans and ultrasounds that can help diagnose all manner of obstetric complications including ectopic pregnancies, placenta praevia, or intra-uterine growth restrictions and demise, and the ability to proscribe life-saving drugs like methergen and oxytocin that treat or limit postpartum haemorrhage – one of the leading causes of maternal mortality in Ladakh, India, Nepal and Tibet.[8] However, the Leh hospital still lacks some of the drugs or equipment recommended by the WHO for obstetric emergencies, including a laboratory to diagnose some infections (blood gases are sent to Mumbai and the delays can affect treatment options).[9] In addition, the obstetric team lacks an adequate set of emergency obstetric

protocols to guide the labor and delivery nurses before obstetricians reach the hospital when they are on call or away from their posts.

The perceived safety to the mother of a hospital delivery in Leh district is largely borne out by maternal health statistics. If one considers only maternal mortality – for there are no reliable official statistics on maternal morbidity or infant and perinatal mortality/morbidity – SNMH has made great strides in a very short time. The maternal mortality ratio (MMR) at SNMH fell precipitously from 746/100,000 in 1988 to 91/100,000 in 2006.[10] The rate of maternal deaths at SNMH was far less than that estimated for the rural countryside in Ladakh and Zangskar, which I calculated to be roughly 416/100,000 in 2006.[11] In 2005, the MMR at Leh Hospital was less than half of that found at a teaching hospital in Trivandarum (215/100,000) and a fraction of that recorded in at a teaching hospital in Allahabad (3778/100,000).[12]

By contrast, infant mortality ratios (IMR) for home and hospital births are not that disparate, and both are far higher in Ladakh than the averages reported for Jammu and Kashmir and all India. Looking only at SNMH, Wiley (2004) reported an IMR of 184/1000 in 1990 and an IMR of 151/1000 in 1995, which were slightly higher than rates reported for the countryside, although the latter may be unreliable.[13] While Zangskar-wide estimates for infant mortality are unavailable, Elford (1994) reported an IMR of 170/1000 in one Zangskari village between 1972 and 1981, and an unpublished survey of central Zangskar by a French NGO reported an IMR of 225/1000 in 1999.[14] More significantly, the infant mortality ratios for Ladakh were more than double the nationwide average of 79/1000 in the early 1990s.[15] The official statistics in 2007, claiming an IMR of 34/1000 for Leh district and an IMR of 57/1000 for Kargil district, strain credulity. It is entirely possible that infant mortality rates have declined but these reports suggest the under-reporting I observed over a recent research trip in 2006 where one well-known maternal death, three stillbirths, and one neonatal death all were unrecorded in the statistics reported at the subdistrict and Kargil district level, even as they were openly discussed by midwives and health officials.[16]

One fact emerges clearly from these statistics. In Ladakh, as elsewhere in India, birth and the first month of life are the most critical periods for infant survival. Neonatal mortality accounts for sixty-nine per cent of infant mortality at Leh Hospital as it does across India (Wiley 2004, Chatterjee 2006). Obstetric practices are related to neonatal mortality, for most early neonatal mortality is related to labour and delivery factors.[17] Thus far, however, there is little data on how hospital or midwifery protocols or practices relate to maternal or infant health outcomes in Ladakh.

Shifting Birth From Home to Hospital in Zangskar

When I first started interviewing women about birth and postpartum experiences in 1995, not one of several dozen women I interviewed had delivered a child in a hospital or clinic. Until recently, most Zangskari women gave birth at home attended by an elderly relative, or perhaps a government-trained auxiliary nurse midwife (ANM). In Zangskar, as in most Tibetan societies, there were no traditional midwives or other traditional birth attendants such as the *dai* that are ubiquitous across much of North India (Adams et al. 2005a, Chawla 1994, Jeffery et al. 1989, Jeffery and Jeffery 1993, Pinto 2008, Pigg 1997, Rozario and Samuel 2002, Van Hollen 2003a, Van Hollen 2003b). The discourses surrounding birth pollution discussed below stigmatize both the mother and the work of the midwives, who hold a position near the bottom of the health care hierarchy. However, unlike the traditional *dai* in much of North India, the midwives in Ladakh do not come from the untouchable strata, although their work is spoken of as 'polluting' (*dribchen*) and unclean (*matsangpa*).[18]

Most of the rural auxiliary nurse-midwives (ANM) have the skills to refer and diagnose but not always to triage some of the most common obstetric complications such as postpartum haemorrhage, eclampsia, obstructed labour, placenta praevia, or uterine rupture. Most critically, most of the Zangskari ANMs do not have the means to transport women to the hospital in a timely fashion for the most common obstetric complications. Indeed, I would estimate that less than half of the ANMs in Zangskar fit the WHO definition of a skilled attendant as 'an accredited health professional – such as midwife, doctor or nurse – who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and *in the identification, management and referral of complications in women and newborns*' (Freedman et al. 2007: 1385, my emphasis). Yet local ANMs capably manage routine deliveries and antenatal care, including fundal measurements and the administration of folic acid and tetanus shots. They are dispersed throughout Zangskar but do not always reside near the health post to which they are assigned, which further limits their access to births and complications that can develop without warning. Although most of the women I spoke to in the 1990s had never given birth with a skilled attendant, by 2007 roughly seventy-three per cent of all deliveries in Zangskar were undertaken in the company of a skilled birth attendant or ANM.[19]

So what has changed in the Zangskari landscape since the early 1990s? In an effort to improve the region's dismal maternal and infant mortality, the Indian government increased the number of local clinics and ANM posts substantially over the last decade. The number of local health outposts was more than doubled from ten to twenty-three between 1996 and 2006. The construction of health clinics across Zangskar included newly upgrading the Padum clinic to a community health centre (CHC) and Karsha's allopathic dispensary to a primary health clinic by 2007. Unfortunately, shoddy construction techniques, such as the use of concrete and tin roofs rather than passive solar designs or traditional rammed-earth construction, has hampered the efficacy of these health centres that remain frigid in the winter and hot in the summer. Moreover, none of the health centres have twenty-four-hour coverage nor adequately trained personnel to effect timely referral or obstetric triage. The expansion of medical centres has also had little impact on the availability of drugs, which are all too often diverted to the black market. My interviews in 1999 at selected dispensaries in Zangskar revealed a critical lack of staff and medicines. Well before the winter, at least one primary health centre had exhausted their supplies of ampicillin for the common but deadly respiratory ailments, sepsis, and meningitis, and metronidazole for the giardia that contributes to chronic malnutrition in children as well as neonatal and infant mortality.

However, Padum's community health centre has made noticeable progress in attracting out-patients and deliveries in recent years. The Padum health centre was open to deliveries and abortions briefly in the mid-1990s, when staffed by a Buddhist doctor from Mulbekh who spent winters at the clinic and gained the trust of his female patients. By 1999, however, staff at the Padum centre had ceased performing emergency deliveries, abortions or sterilizations. Some said that the new doctor, a descendant of the royal house in Padum, may have been concerned with birth pollution.[20] More critically, Padum's family planning services had come under heavy criticism by the local Zangskar Buddhist Association (ZBA) due to the rising conflicts between Muslims and Buddhists who were agitating for political and religious power (Gutschow 2006). Both the ZBA and the Ladakh Buddhist Association continue to strongly oppose any efforts to limit the population of Buddhists, already a fragile minority and electorate in a state dominated by Muslims and a nation dominated by Hindus (Van Beek 1997, Aggarwal 2005).

By 2005, however, the opportunity for institutional deliveries in Zangskar had changed dramatically. When Dr Ravia, a Muslim from

Padum with an MBBS (Bachelor of Medicine and Bachelor of Surgery) degree, arrived at the Padum clinic in 2004, she was the first female doctor to work there. Although Dr Ravia has no training in obstetrics, she worked with two senior nurse-midwives in Zangskar, who had been promoted recently after a two-year training period in Srinagar. As their return



Figure 8.3. The labour and delivery room at the Padum clinic in 2006.

coincided with the beginning of the JSY scheme, which is pushing rural health centres like the Padum clinic to perform institutional deliveries, these nurses were able to obtain critical drugs such as oxytocin, misoprostol, and epidosin as well as a foot-operated suction pump for neonatal resuscitation.

By late 2006, the Padum clinic was staffed entirely by local Zangskaris, including three doctors with an MBBS degree, two nurses, and a handful of female and male multi-purpose workers. The Padum clinic is undergoing major construction and now houses a labour room, a vaccination clinic, a primary care clinic and a functioning twenty-bed ward for infectious, operative and obstetric patients. There are still no facilities for anaesthesiology, caesareans or other major operations, and emergency transport in the winter months remains a serious problem.

By 2007, roughly eighty per cent of all deliveries in Zangskar still took place at home. However, a small and growing minority of women are choosing to deliver at the Padum clinic or at district hospitals in Leh and Kargil. Between April and August of 2006, twenty-three babies were delivered at the Padum clinic, while the previous two years had seen roughly twenty-five births per annum.[21] There are no reliable statistics on how many Zangskari women deliver in Leh or Kargil hospital, yet Leh Hospital records from early 2006 suggest that roughly twenty per cent of the pregnant women from Zangskar had left to deliver in Leh. SNMH, the Leh district hospital, lies twice as far from Padum as Kargil's hospital, and jeep transport to either may be blocked by landslides in summer and by snow for most of the winter. All of the area hospitals require a journey over the Pensi-La pass, which is closed every year from November through May. Many Zangskari women prefer to deliver at the hospitals in Leh or Srinagar rather than the Kargil hospital whose staff is reputed to be less competent and more corrupt than the staff at SNMH.

If a pregnant woman develops complications in the middle of winter, she has limited choices. She can attempt to traverse a set of passes over 3500 metres or travel along the Zangskar river gorge during the few weeks that the river is partly frozen each winter.[22] Alternatively, she can request an emergency medical evacuation by helicopter, a free but highly unreliable service. During the two decades I have worked in Zangskar, which included three winters, I knew several women who died in childbirth due to helicopter delays. The helicopter's arrival is contingent on a confluence of many factors including weather and visibility, communication between Padum and the army base in Udhampur, availability of helicopters, and



Figure 8.4. From left are pictured sisters Karma and Nyima, along with their four children. At far right is Karma and Nyima's sister Lhamo, a midwife who helped to deliver all the children in the picture. (All names are pseudonyms).

sufficiently skilled pilots. Finally, a Zangskari woman may choose to leave for Leh or Kargil well before her delivery date. Yet even families who can afford travel costs may balk at renting an apartment and covering food costs all winter in urban centres like Leh or Kargil. Let us turn then to a story that illustrates the strategic choices women make around childbirth.

A Home Birth in Zangskar

After getting married at the 'late' age of thirty-five, Nyima was pregnant soon after in the autumn of 2005. Although she had always wanted to spend time in Leh, Nyima was reluctant to spend the winter in Leh with her husband Jamyang, a tour guide. She begged off at the last minute, deciding she preferred the comfort of her friends and her home for her pregnancy. She was due to give birth in spring and hoped that the pass to Leh would be open by then if needed. She did not have the chance to tell her husband to return home all winter as the phone offices and internet café in Padum were shut. But she was relieved that she had not yet moved into her in-law's house,

where her elderly in-laws, Jamyang's uncles and unmarried aunts, and her sister and brother-in-law and their children lived in cramped quarters.

Nyima enjoyed the simplicity of her natal home where she had only to cook for her father, her stepmother and two stepsisters who still lived at home and were at school. Eight of Nyima's ten siblings had married and moved out, long after the stormy family quarrels that followed her mother's death during the delivery of her tenth child and her father's subsequent remarriage. Nyima was closest to her sister, Karma, who lived next door in a new house she had built after scandalizing the family by eloping with an ex-monk. Her other sister, Lhamo, a midwife, had recently been promoted as a nurse at Padum's community health centre.

Lhamo made the trip from Padum in mid-winter to commiserate on Karma's daughter's death from meningitis a few weeks earlier after the Losar or New Year celebrations, During her stay, she said that Nyima's belly was riding too high and was too pointy for a singleton pregnancy. Nyima refused to consider the idea of twins, which were believed to attract the evil eye (*mikha*) as they were a sign of excess auspiciousness or good fortune. She did not go to Padum for an ultrasound as the newly arrived machine had already broken and was still awaiting parts two years later, I discovered.

In late May, after spending a day racing back and forth along the lengthy irrigation channels that carried water to the fields, Nyima felt a deep ache in her lower back. She assumed the hard work was to blame and thought nothing more of it as she finished the delicious stew (*phagtug*) of garden greens, dried cheese, and homemade wheat noodles that Lhamo has cooked and went straight to sleep. Lhamo awoke in the middle of the night to her sister's groans: 'Ahhroohwahhh. Ahroohwahhh.'

When Lhamo heard this cry, she guessed immediately that Nyima was in labour. This was no random lament but one scripted for female pain in the stoic Zangskari culture. After finding a match and lighting the kerosene lantern, Lhamo searched for and found the assorted syringes and ampoules of glucose and epidosin that she had sent Nyima a few weeks earlier in case she did not arrive in time for the delivery. Lhamo put the large pot on to boil as her sister Nyima stirred under the warm blankets. Lhamo went into the living room next to the kitchen to sweep the floor and the woollen Tibetan carpets before laying down a fresh blanket and rubberized mat on the spot where she piled extra blankets. Lhamo knew that Nyima should not deliver in the kitchen, which would risk polluting the hearth goddess (*tablhamo*) who, together with subterranean spirits known as the *lu*, ensured household prosperity. While Zangskari women are banned from delivering

in the warmest room of the house, the kitchen, they are not banished to the stables as are the women from the neighbouring Shia Muslim villages of Kargil district and among the Tibetan nomads, for instance.[23]

As Nyima's groans became more insistent, Lhamo washed her hands and began her first internal examination of the evening. She discovered two things in almost immediate succession. Nyima was already 'two fingers' (three centimetres) dilated, but even more importantly, the baby was not lying headfirst. She removed her hand and smiled calmly at her sister to reassure her. Lhamo's thoughts tossed as she pressed the blankets around Nyima's lower back.

As she went into the kitchen to brew the butter tea, she briefly considered trying to transport Nyima to Leh Hospital. Most of Lhamo's deliveries had been headfirst or vertex, and all of her breech deliveries had been carried out with another midwife. She knew that the Padum health centre had no facilities for emergency caesareans, but that breech deliveries offered far more risks than a normal delivery, including cord prolapse, head entrapment and obstructed labour that could lead to foetal asphyxia. Even if she sent someone on foot to Padum's police headquarters to radio Leh for a helicopter, it could be days before the helicopter arrived. If she found a jeep and driver willing to risk the pass, it was unclear that they could pass through the snowbanks on top of the pass.

As she steadily pushed and pulled the wooden handle of her mother's tea churn, Lhamo thought about her own mother, who had died during a breech delivery thirty-three years earlier. Nyima had been just a baby, two years old, sleeping through the chaos. But Lhamo, who had been six, had known something was wrong when Zangskar's two most prominent *amchi* had come to the door that night. Lhamo recalled the palpable fear in the kitchen where her father prayed and watched the *amchi* prepare their medicinal butter and herbs, while her mother delivered a stillborn child and then bled to death in the room next to the kitchen. She was relieved that her father had built a new house, where Nyima would soon deliver her baby.

Lhamo then sent for her neighbour, the *amchi*'s son-in-law, Gara, a pharmacist who had been called to attend many births due to his poise during difficult deliveries.[24] After Gara arrived and confirmed that Nyima's child was presenting as breech, he went into the kitchen while Lhamo stayed at her sister's side, applying hot stones wrapped in cloth and massaging her back with butter. When Nyima seemed to tire after a few hours, Lhamo gave her sister a shot of glucose for energy and a shot of epidosin to hasten her cervical dilation.[25]

Nyima responded well and began to groan in the throes of transition. Lhamo confirmed that she was fully dilated to minimize the risk of head entrapment, before asking Nyima to push. She helped to support Nyima's back while Gara waited to catch the baby. He was careful to keep his hands off the breech as the buttocks pushed into view. When the baby had slipped out up to its navel, he slipped in a finger in to pull out the first shoulder, rotating it expertly as required. With the risk of cord compression greatest, the head came quickly. Since Jamyang was not present Gara cut the umbilical cord with a pair of scissors that Lhamo had sterilized on the stove. Lhamo wrapped her new nephew in a clean flannel cloth and laid him on his mother's chest, while Nyima rested after her exertions.

Lhamo then checked for the placenta, but realized there was indeed another baby to push out. After Nyima recovered from this news, she gathered her strength to push the next baby out. Her daughter, who was headfirst, slipped out with one strong push, as her brother had widened the opening quite conveniently. Lhamo asked Gara to cut the cord while she dried off the second baby and placed her on Nyima's other side, where the baby began to suckle



Figure 8.5. Nyima and her sixteen month-old twins in September 2006.
(Although she had only travelled fifty yards to her sister's house, Nyima had smudged her twins' foreheads with ash to ward off the evil eye (*mikha*) or demonic spirits (*dud*) that are tricked into thinking the children belong to the blacksmith caste.)

vigorously. Nyima closed her eyes and began to cry as the two little infants sucked and wailed as they fell off her breasts. Lhamo then helped her sister deliver the placenta, which would be buried later in the winter kitchen (*yogkhang*), the symbolic womb of the house near the shrine to the *lu*, a fertility spirit. She brought her sister a celebratory cup of tea to welcome her children into the world. Nyima would spend the next two weeks in seclusion in the room where she delivered, while her sister and family members brought her food. She would only be allowed out of the house after a series of Buddhist rites of purification and blessing were performed to cleanse herself and household members of the ritual pollution (*drib*) incurred by birth.[26]

Three days after Nyima's delivery, two monks were called to perform the first of three juniper purification rites (*sangs*) at the household altar to the clan deity (*phalha*). The monks came again at one and two weeks after the birth to complete the cycle of purifications that would cleanse the household and its inhabitants of the dangerous birth pollution that the delivery had produced. During this period, Nyima followed a set of interdictions (*dzem ches*) that included staying inside and avoiding windows or doorways where she might be in view of the monastery's shrine room (*gonkhang*) or village shrine (*lhato*) whose guardian spirits might be offended by her polluted state. She was forbidden from cooking or touching the hearth for fear of angering the hearth goddess (*tablhamo*) and underground spirits (*lu*) who are responsible for fertility.

Strategic Constraints for Ladakhi Women

As Nyima's story articulates, there are numerous constraints that limit the degree of choice a Ladakhi woman has about where and how to deliver her child. A woman's childbearing decisions are influenced as much by the perceived safety or benefits of a hospital delivery as by season and geography, household wealth, and access to prenatal care, transport, referral or skilled intrapartum services. While many of my Zangskari informants readily admitted that a hospital birth might be safer than a home birth, not all agreed it was preferable or feasible. For some costs were prohibitive; for others it was fear of arrogant nurses in Leh, while yet others were embarrassed to give birth in front of strangers and far from the comfort of their family and homes. A few of my Zangskari informants also suggested that concerns about ritual pollution played a part.

Palmo, a long-time friend in Zangskar, described her own home births as follows: 'I would prefer to have all my children at home, alone, even now

when going to the hospital is an option. I am most comfortable pushing the baby out alone, with nobody present, not even my husband.' When I asked Palmo why she preferred complete solitude, she shrugged and said that her labours were easier and quicker that way. For Palmo and several other Zangskari informants, birth was a private process best accomplished in solitude, rather than in a public hospital or clinic setting. The French obstetrician Michel Odent understands this mammalian predilection for privacy during labour as allowing the primitive brain and the autonomous nervous system to take over from the more rational neocortex that can inhibit the physiological progress of uterine contractions.[27] Women in Zangskar also described their reservations about the harsh treatment that was dealt out by nurses in Leh, who frequently scold their patients for arriving in the throes of labour with complications that were misdiagnosed or insufficiently referred by their colleagues in the field.

In Zangskar, as in Ladakh, the main factors that contributed to a rise in clinic births were: rising household income, better education, better antenatal care and a Ladakh-wide shift away from *amchi* medicine towards biomedicine (Gutschow 2007, Pordié 2003, 2008). As incomes and education levels have risen, women – and their daughters – have begun to place a premium on the safety of hospital or clinic births. Rising income permits women to travel outside of Zangskar, where they may discover improved birthing facilities and services. Furthermore, the rise in household incomes and the proliferation of private taxis and bus lines in Zangskar has facilitated the transport of pregnant women to Padum's community health centre as well as to district hospitals in the towns of Leh and Kargil.

Very little has been published on who attended births in Zangskar prior to the advent of government midwives in the 1960s. My elderly informants insisted that it was mostly experienced mothers or aunts, and in times of distress, an *amchi*, practioners of Tibetan medicine. *Amchi* are still consulted during pregnancy and the postpartum period, yet they are called only rarely during childbirth, if there is an emergency and if no midwife is to be found. My interviews in 2007 and in the 1990s with obstetric staff at Leh Hospital revealed that *amchi* are unwelcome but not barred from the obstetric ward. Yet the labour and delivery staff showed clear scorn for *amchi* diagnoses or treatments. Less than five per cent of my informants at Leh Hospital in 1995 had consulted an *amchi* during their pregnancy, while Wiley's (2002) research in the same period reported that only six per cent of her informants consulted an *amchi* during pregnancy. Hancart-Petitet and Pordié (in press) describe a single case in which an *amchi* intervenes to avert a caesarean but

do not discuss the hostility of hospital-based obstetric staff towards *amchi*.

None of my Zangskari informants in 2006 had consulted an *amchi* during their home deliveries, even when they suffered major complications. I interviewed both daughters of the most prominent *amchi* in Karsha (who had attended Lhamo's mother's death). Neither daughter had asked her father to attend their six home deliveries, which included a life-threatening haemorrhage, obstructed labour, and stillbirth for one daughter and severe dystocia and cord entanglement for the other. Elsewhere (Gutschow 2004, 1998), I described a case in which a young woman died from a precipitous postpartum haemorrhage, while being attended by her grandfather, an *amchi*. While the grandfather did little to help his granddaughter to expel the placenta that exacerbated her haemorrhage, he was careful to take his medicines out of the room shortly before his granddaughter expired. I have heard several *amchi* explain that death pollution (*drib*) can negate the auspiciousness of Tibetan medicines. This may help to explain why *amchi* did not routinely attend births in the Tibetan plateau.

The Buddhist Discourse on Birth Pollution or *Drib*

Birth pollution affects the choice over where to deliver, because Zangskari culture defines new mothers as ritually polluted. As long as a woman remains in seclusion until purification rites are performed, this pollution is tolerated by the clan deity where the woman resides. Generally this would mean a woman's marital house unless she has not yet had a formal wedding, like Nyima. When Nyima eloped with Jamyang, she did not have a formal or 'large wedding' (*bagston chenmo*) in which the bride formally takes leave from her natal guardian deity and then supplicates and passes under the protection of her new husband's clan deity. Once a woman shifts her allegiance away from her natal clan deity (*phalha*) to her husband's clan deity, she can no longer appear before or worship her natal clan deity. Although individuals can worship any number of village or regional deities, each person worships and comes under the protection of only one clan deity.[28]

Gutschow (1998, 2004) describes the seclusion period for new mothers that can vary considerably according to region, village and household. The new mother (and her husband, to a lesser degree) are required to remain indoors for between one and four weeks of seclusion until the requisite juniper purifications have been performed. Even after the husband is free to leave the house, he may be forbidden from crossing irrigation channels or visiting monasteries for a month, to avoid angering the monastic

protectors and the *lu* who protect household fertility as well as snowfall, springs, streams and water supply.

Several Zangskari informants told stories of births that took place accidentally in their natal homes and resulted in a stillbirth, obstructed labour or other complications. Even well educated women succumb to the belief that they have 'offended' a deity by delivering outside of their husband's house, the 'proper' place to deliver a child according to traditional Zangskari beliefs. A schoolteacher with an MA swore that going to her natal home and/or crossing the village stream while in labour resulted in a terribly difficult delivery. Although she knew the interdictions against delivering in her natal home, she went into labour in an uncomfortable new apartment and decided that her mother's house, across the riverbed, would be much warmer. When she delivered a healthy son after twelve hours of excruciating back pain, she blamed her natal deity, the four-armed Mahakala *(Gönpo chag zhipa*), who was considered especially strict regarding pollution practices. She recollected that her pain was alleviated by a local *amchi* who brought some long-life medicine produced by Dharamsala's Astro and Medicine Institute (Men-Tsee-Khang).[29] She never gave birth at home again and delivered her second and third children at SNMH. Another informant recalled losing her first child when she delivered at her natal home, although her second child was safely delivered in her husband's home.

These beliefs have a direct impact on the choice to deliver in a hospital because they define mothers as highly contagious or polluted (*dribchen)* immediately after their deliveries. When a new mother returns home from the hospital, she puts herself and her child in danger, as her unpurified presence angers household, village, regional, and monastic protectors whose shrines she passes on the way home. Since most of the shrines or chapels are located high up in a largely treeless landscape, the potential for harm is considerable. The only way to defuse this problem is to perform a purification rite at an altar dedicated to her clan deity.

Those who choose hospital deliveries may find ways to perform these purificatory rites, albeit by stretching the traditional notion of 'seclusion'. Many of my Buddhist informants at Leh Hospital admitted they would perform purification rites immediately upon returning home from the hospital, so as not to offend their household clan deity. Many women chose to stay in rented quarters for the first week after their delivery where they would hold the purification rite before returning home. One new mother from Sabu village – who feared that her journey home would take her

across Sabu's streams and springs where the *lu* are especially powerful – decided not to return home for a week. Even her sister, a senior nurse-midwife in the hospital, agreed that it could be dangerous to offend the *lu* in Sabu. Yet most women are not fortunate enough to have a relative living near the hospital who shares their clan deity, and some relatives balk at a visit from a woman who had recently delivered out of fear of pollution.

Overall, women in Ladakh have developed a range of responses to the ritual interdiction about giving birth outside their residential home. At one end of the spectrum are the women who deliver at Leh Hospital without any regard for the deities they offend. This group includes Muslims, migrants from elsewhere in Jammu and Kashmir and India, and Nepali migrants. It also includes increasing numbers of modern Ladakhi women who may have been educated beyond Ladakh and who no longer follow traditional ritual conventions. At the other end of the spectrum are Zangskari and rural Ladakhi women who avoid hospital deliveries for fear of offending guardian deities when they return home. In the middle of the spectrum is the largest group—women who deliver in the hospital, but observe purification rites at nearby apartments shortly after discharge. Many women from remote parts of Ladakh and Zangskar who deliver in Leh Hospital perform the necessary purification rites in their rental apartments, where they have set up a temporary shrine to their household deity. Because these rentals are recent constructions in urban slums, with no surrounding fields or shrines to the *lu*, there is less concern about angering the deities that control water and fertility. One might posit a selection bias that also explains that couples who choose a hospital delivery are more educated or modern and thus less likely to be interested in purification rites.

Cultural flows between North India and Ladakh, as well as changing socio-economic conditions, may exacerbate rather than erode anxieties about birth pollution. To understand how the very spirits who preserve fertility (*lu, tablhamo*) are offended by birth pollution, it helps to look at broader South Asian representations of birth, female power and pollution. As Chawla (2006) cogently argues, childbirth as well as the work of midwives or dais are constructed as shameful (*sharam*) or polluting in patriarchal religious discourse, precisely because it is an arena of female power and experience that men cannot access. The infusion of Ladakhi culture with North Indian Brahmanic and Bollywood culture may strengthen the stigma around birth pollution, if recent years are any guide. Anxieties over birth pollution have become stronger rather than weaker in Leh according to some Zangskari couples, who have had difficulty finding

rooms for rent in Leh. Although the number of guesthouses, most of which are unoccupied all winter, has increased precipitously, their owners rarely rent them to pregnant couples. It was implied that the landlords feared the birth pollution incurred if a woman delivered precipitously at home or once she returned from a hospital delivery. Most Zangskari couples have an easier time renting in urban slums on the outskirts of Leh that are downstream from Leh's cultivated areas and elite neighbourhoods. The successive wave of droughts, locust plagues and other effects of climate change in recent years may also contribute to heightened concerns and ritual activity around the *lu*, even as watershed development projects regularly transgress the *lu*.[30]

Conclusions: Obstetric and Buddhist Discourses as Explanatory Mechanisms

Birth pollution beliefs and biomedical discourses are both legitimated by their ability to provide explanatory mechanisms for preventing a disastrous delivery. In other words, both discourses imply that they can protect mothers and their children against the rather pervasive reality of death or disability. In Buddhist ritual discourses, the woman in childbirth is conceptualized as 'dangerous' to the guardian spirits because of her birth pollution and thus she is 'in danger' of offending the guardian spirits of household, village, clan.[31] By contrast, obstetric discourses define a woman in childbirth as 'in danger' of complications while the delivery is defined as dangerous if she insists on an unassisted birth, home birth or otherwise flaunts obstetric protocols.

Buddhist discourse defines a woman as in danger if she does not deliver in her husband's home, where she is under her (by marriage) clan deity's protective influence. She is also in danger of offending the hearth goddess or the *lu* if she delivers in the kitchen, or if she transgresses the dictates of postpartum seclusion. By delivering in a hospital, a woman waives the protective influences of her household *phalha* and *lu*, while risking the offense of other protective deities. In such cases, a stillbirth, early neonatal death or other misfortune is cast as the retribution of offended deities. Yet what do people say when a mother or child dies at home, even under the purported protection of the clan deity? These cases do not negate Buddhist discourses because there are other unappeased spirits or sources of negativity – witches, evil eye or angry spirits – to be blamed.[32] By refusing a verifiable rationality, Buddhist discourses are self-legitimating and

circular, as long as initial belief in spirits and *karma* is maintained as I have shown (Gutschow 2004, in press).

The state-sponsored biomedical discourse argues that institutional deliveries are safer than home births for mother and newborns. In promising women 'safe deliveries' at the hospital, such discourse may elide the real risks that remain for women and newborns even in the hospital. Leh Hospital has noticeably reduced the maternal mortality ratio compared to the Indian average and the surrounding countryside. Yet perinatal and neonatal mortality rates at hospital may be similar to those for home deliveries, although far more research is needed on this point. Hospital discourses may promise a degree of protection by having front-line access to emergency obstetric care; yet the degree of care available may be contingent on timely referral and transport. At Leh, as at other district hospitals in rural India, there may be cases in which a woman arrives with dire complications that could have been averted with adequate transport or attention as well as cases of women admitted for normal deliveries who later develop misrecognized intrapartum complications.

In promising the pregnant mother more safety in childbirth, obstetric discourse overlooks the significant difference between routine deliveries that may be handled safely at home and deliveries that require emergency obstetric care. Across the developing world as in Ladakh, it is unavoidable that some maternal and foetal deaths will continue to occur in the hospital.[33] Some medical bureaucrats try to blame such deaths on the innate pathology of birth rather than on the delays in timely diagnosis, transport and treatment of life-threatening obstetric complications. It is a well-known truism that while most obstetric complications are neither predictable nor preventable, they are readily treatable if handled in a competent and timely fashion (Maine and Rosenfield 1999). This is as true for home births as for hospital births, although biomedical discourse continues to downplay this fact.[34] For the time being, women and their midwives in Ladakh will strategically adapt both obstetric and Buddhist discourses to their other ever-shifting needs around childbirth.

Notes

1. I would like to thank Padma Dolma and Dr Lahdol for their generous time and on ongoing Socratic dialogue on obstetric emergencies and treatments in Ladakh that dates back to 2006 and 1995, respectively. I thank Cecilia Van Hollen, Claudia Gras, Mona Schrempf, Sienna Craig and Vincanne Adams for highly productive conversations including an editors lunch at Dartmouth that helped shape the essay in important ways.

2. Adams (2001) describes the way in which Tibetan medicine upsets the enlightenment division between the rationalities of science and religion. Adams et al. (2005a) describe the differences between biomedical and popular or folk conceptions of what a 'safe delivery' might entail in the TAR. Gutschow (in press) and Pordié (2003, 2008) describe the overlap and intersection of Tibetan medical and Buddhist healing practices in Ladakh.
3. See Adams et al. (2005a, 2005b) and Miller et al. (2007) on safe deliveries, postpartum haemorrhage, and the challenge of clinic trials in Tibet, while Sangay (1984), Chophel (1984), Yeshi Dhonden (1980), Maiden and Fairwell (1997), and Garrett (2008) discuss rituals, beliefs and textual idioms around childbirth, pregnancy and embryology among Tibetans in exile and historic Tibet.
4. In 2001, Leh district had 117,637 residents, while Kargil was home to 115,227 people.
5. I culled the data on deliveries and stillbirths from Leh Hospital records in 1995, 1996, 1997, 1999, 2006 and 2007. Hospital data is reported according to the fiscal year, which runs from April through March. Thus a year ending in '1980' actually refers to 1 April 1979 to 31 March 1980. This may explain why Wiley (2002: 1092) reports only thirty births in 1980.
6. During the month of April 2006, 16 per cent (12 out of 73) of the deliveries at Leh Hospital were by women from Kargil district and 9.5 per cent were by women from Zangskar. The high percentage of Zangskari women is all the more remarkable as the mountain passes to Zangskar are not yet open in April.
7. The rates of institutional deliveries and home births are quoted from the Leh District Health Plan (Government of India 2007b: 49) and Kargil District Health Plan (Government of India 2007a: 48). Elsewhere in each report, the institutional delivery rate is mistakenly calculated from pregnancies rather than live births; I have ignored those rates.
8. Miller et al. (2007: 217) reports that 13.4 per cent of 1100 vaginal deliveries at Lhasa hospital resulted in postpartum haemorrhage. *Rising Nepal* (19 December 2006) reports that half of all maternal deaths in Nepal are due to haemorrhage while Rawal (2003: 45) attributes nearly one third of all maternal deaths in India to the same cause.
9. WHO (2007b) guideline for Integrated Management of Pregnancy and Childbirth (IMPAC) lists the key interventions and required for routine and specialized or emergency care of mother and neonate.
10. Maternal mortality ratios were estimated using Leh Hospital records in 1995, 1996 and 2007, and Dr Lahdol's unpublished paper on birthing trends at Leh Hospital.
11. My calculations from the Zangskari medical census in 2006 yielded an estimated maternal mortality ratio (MMR) of 416/100,000. WHO (2007a) estimated India's maternal mortality as 450/100,000 in 2005, while Adams et al. (2005a) estimated the MMR in the TAR to range between 400–500/100,000.
12. The maternal mortality ratios for Trivandarum and Allahabad hospitals were published in the well-known academic *Journal of Obstetrics and Gynecology of India* (Purandare et al. 2007: 249).

13. The Leh Nutrition Project (LNP) estimated the infant mortality ratio (IMR) in rural Ladakh to range between 102–110/1000 in 1988. Bhasin (2005) found an IMR of 98/1000 for Ladakhi Buddhists and an IMR of 152/1000 for Ladakhi Muslims in the last decade, but does not cite her source. Wiley's (2004: 98) data helps corroborate Bhasin's data on the difference between Buddhist and Muslim outcomes as Buddhist newborns were on average 193 grams heavier than Muslim newborns.
14. The French NGO, Aide Médical Zanskar, estimated Zangskar's IMR in 1999 (personal correspondence). Gutschow (1998) notes that Save the Children recorded the IMR in Sankoo Block of Kargil district to be 125/1000 in 1996. Hancart-Petitet's (2005:123) report of a maternal mortality ratio (MMR) of 21,000/100,000 may reflect her tiny sample pool and it is unclear whether her term "le taux de mortalité maternelle" estimates the maternal deaths per live births or per reproductive age women, which would technically be the maternal mortality rate. She notes that her data was drawn from a single village of four households, using three generations of data – including deceased individuals, and so it may have been difficult to verify all deaths as due to maternal causes.
15. The National Family Health Survey (NFHS), which was completed in 1993, 1999 and 2006, are considered the gold standard of demographic surveys in India. See http://www.nfhsindia.org/ and http://www.measuredhs.com/. By 2006, the IMR in Jammu and Kashmir had dropped to 45/1000 while the all-India rate dipped to 57/1000 according to NFHS-3.
16. The WHO (2007b: 5) reports that 'early neonatal deaths occur during the perinatal period, and have obstetric origins, similar to those leading to stillbirths'. The WHO also reports that three million out of the four million neonatal deaths in the world each year are early neonatal deaths.
17. The District Health Plan, Kargil (Government of India 2007a) and District Health Plan, Leh (Government of India 2007b) report infant mortality ratios, but do not give any indication of how the statistics were gathered. In light of the considerable under-reporting of infant and neonatal deaths, as well as maternal deaths, this data should be treated with caution.
18. Compare Van Hollen's (2003a) description of government health workers and traditional midwives or *maruttuvaccis* in Tamil Nadu, as well as Jeffrey and Jeffrey's (2003) description of *dais* in North India.
19. I collected statistics on institutional and home births in Zangskar as well as a basic medical census from clinic records in Padum in September and October 2006.
20. Gutschow (2006) discusses an incident of ritual pollution that the Padum royal household faced during Partition and its subsequent effects on the family's social status.
21. The official statistics on home versus institutional births, as well as for infant and maternal mortality for Zangskar, are highly unreliable. Padum records had registered twenty-three institutional births between April and August 2006, yet the data sent to Kargil noted only eighteen institutional deliveries. During the same period, midwives told me of a single maternal death and several stillbirths, but the Kargil data omitted these deaths in Zangskar.

22. The rigours of Chadar travel and the remote geography of Zangskar are detailed in Crook and Osmaston (1994) and Gutschow (2004) who also describes a maternal death in midwinter due to postpartum haemorrhage. According to my interviews at Padum clinic, there was only one helicopter transport of an obstetric patient between 1993 and 1995, although there were several maternal deaths during that period.
23. In nomadic communities in Tibet, Adams et al. (2005a) report that women deliver their children in the stables or outside the main tent.
24. Gara, whose real name is Stanba Gyaltsen, is nicknamed 'blacksmith' (*gar ba*). This nickname is often given after several children or infants die and the parents wish to fool negative spirits into thinking their child is a blacksmith or outcast (*rigs ngan*).
25. Epidosin is the trade name for valethamate bromide, which the *Journal of the American Medical Association* (anonymous 1959: 1316) described as an antispasmodic drug used in the U.S. for treating spasms of the gastrointestinal, genitor-urinary and biliary tracts. Kuruvila et al.'s (1992) RCT reported no significant benefits in hastening cervical dilation for epidosin over a placebo, while later studies such as Kaur et al. (1995) and Batukan et al. (2006), comparing intramuscular (IM) and intravenous (IV) administration of the drug, found significant improvements in the IM method in hastening cervical dilation.
26. Gutschow (1998, 2004) delineates the discourse around purity and pollution in Zangskar and its relationship to broader Tibetan discourses, including the connection between *drip* and gender discussed in Daniels (1994), Ortner (1973, 1978, 1996), and March (1979).
27. Odent (2004) theorizes that the mammalian uterus is a highly efficient muscle that needs little input from the brain's neocortex or the sympathetic nervous system.
28. Gutschow (1995, 1998) contrasts the loose relationship between clan affiliation and household deities as described by Dollfus (1989) for Leh district and the close connection between clan affiliation and household/clan deity in Zangskar. The kinship categories that hold in Zangskar are no longer in use in Ladakh, perhaps due to Ladakh's greater social mobility and immigration during the twentieth century.
29. Craig (2006) discusses the rhetoric and consumer demand for the long-life pills in Tibet, which are produced by several medicinal institutes in Lhasa.
30. On recent droughts and locust plagues in Zangskar, see Gutschow and Mankelow (2001) and Mankelow (2007).
31. Douglas (1966) and Ortner (1973, 1996) have both noted the connection between ritual pollution and moments of danger for ambiguous figures like women in childbirth.
32. Gutschow (in press) explains how *amchi* diagnose and treat the disorders caused by these spirits.
33. Ronsmans and Graham (2006: 1196) describe the considerable evidence that many maternal deaths take place in hospital settings, where confidential inquiries 'suggest the proportion for which substandard care played a substantial role is often more than a third'. In other words, the quality of care in health facilities may be directly contributing to the very maternal deaths such facilities were designed to prevent.

34. Johnson and Daviss (2005) offer a prospective cohort study and analyse several other studies, all of which show no differences in neonatal mortality or morbidity between low-risk home and hospital births, while Sakala and Corry (2008: 4) describe the 'over-used maternity practices' in the U.S. that show little proven benefit.

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Chapter 9

From Empowerments to Power Calculations: Notes on Efficacy, Value and Method[1]

Sienna R. Craig

> It is important to remember that the different forms of efficacy, though distinguishable analytically, are experienced simultaneously. A double-blind random controlled trial is designed to isolate for purposes of analysis (to dissolve a whole into parts). But life is lived as a synthesis (a putting together of parts into wholes). Not only do efficacies combine, but the acts of giving/taking medicine and looking to effects are integrated into larger processes of dealing with problems and living life.
>
> Whyte, van der Geest and Hardon (2002: 36)

Introduction

The notion of ritual efficacy has a long history in both the discipline of anthropology and in the context of Tibetan civilization. One need only look as far as Evans-Pritchard's *Witchcraft, Oracles and Magic Among the Azande* (1976) or Lévi-Strauss's seminal insights in 'The Sorcerer and His Magic' (1967) to understand the salience of inquiry into the ways meaning is made through ritualized action, and by which cure – or other types of biosocial transformation – is attained. In medical anthropology, a more general concern with what is meant by the term 'efficacy' across biomedical and non-Western medical praxes has produced a wellspring of ethnographic examples, and, equally, an array of methodological and epistemological concerns (Ahern 1979, Anderson 1992, Barnes 2005, Etkin 1988, Waldram 2000, Whyte et al. 2002). At the centre of these insights and problematics are questions about what kinds of comparisons can be made, and how, about efficacy across cultures, and what the value of such comparisons are,

in theoretical and pragmatic terms.[2] In addition, if we acknowledge that all medicines, as material things, have both social and pharmacological 'lives', we are still left to ponder the following questions. How and why does a medicine work? What lends it power and potency? What makes it valuable? Whose expert knowledge evaluates its merits and illuminates its risks? For whom and why is it made?

Medical anthropology has long been committed to illuminating the ways in which medicine operates as a cultural system, and to indexing how narrowly-defined conceptions of 'medicine' or 'health' – such as a skilfully marketed selective serotonin reuptake inhibitor (SSRI), the response of a flesh wound to antibiotic cream, a tuberculosis patient's clean chest X-ray, etc. – do not do justice to what Kleinman and Csordas (1987) describe as the 'therapeutic process'. Likewise, numerous scholars have pointed out the ways that the practice of medicine, and scientific processes more generally, are rooted in social history, moulded by political ideology, and given form and imbued with power through ritualized acts (cf., Barnes 2005; Foucault 1973; Latour 1979, 1993; Nandy 1988; Prakash 1999; Rose 2007). Understood most broadly, efficacy is 'the capacity to affect or generate a desired outcome'.[3] A medicine's efficacy is often produced at the crossroads of ritual action and pharmacology; it emerges at the intersections of socio-cultural and biophysical experience within the bounds of specific contexts: historical, political, socioeconomic, even ecological. For example, Daniel Moerman's (2002) work on what he calls 'meaning response' – his recasting of what is commonly called the 'placebo effect' – provides insight into some of the working assumptions of biomedical science and how efficacy has been theorized therein.[4] As we shall see, the relationship between placebos and different typologies of efficacy is particularly salient to the ethnography at the heart of this chapter.[5]

In Tibetan social life, illustrations of the links between ritual, therapeutic process and social meaning abound, from the performance of exorcisms (*döndré pung, drédon chithrö*) or soul-calling ceremonies (*lalu*) by, and for, individuals (Samuel 1993: 289, Karmay 1998: 311) to propitiations of serpent spirits (Tib. *lu*, Skt. *nāga*) in an attempt to alleviate personal, communal or even environmental suffering and imbalance (Vargas 2006). One might note the performative efficacy of ritual circumambulation around a monastery or a mountain, as a way of re-inscribing claims to territory, honouring local divinity, and, as such, helping to maintain a healthy community, as well as earning merit as an individual (Makley 2003, Huber 1999). Within the context of Tibetan medical practices, the workings

of ritual to effect what we might call positive health outcomes can be observed at many levels: from a healer-physician's recitation of *mantra* during the collection of *materia medica* in order to ensure maximum potency of these ingredients, to prescriptions that not only impel a patient to adjust her diet and adhere to a regimen of ingested medicines, but that also suggest intervention by a ritual specialist on the patient's behalf (cf., Schrempf, in this volume).

This chapter examines some points of connection between two seemingly disparate methodologies, both of which are concerned with empirical investigation, ritual form and the accomplishment of efficacious outcomes in medicine. The first is a specific genre of Tibetan ritual called *mendrub*, an extremely powerful type of Buddhist practice aimed, by turns, at empowering medicines and medicinal ingredients, accomplishing yogic and contemplative exercises, bestowing a multitude of benefits on ritual practitioners, and imparting blessings on lay people. The second is the randomized controlled trial (RCT), the so-called 'gold standard' of modern scientific medicine, the method by which 'best practices' are defined and the paragon of clinical evidence is produced.[6] True to this volume's central themes, this chapter explores what happens when what some might denote as a particularly 'religious' domain (the *mendrub*) and an iconically 'scientific' one (the RCT) come together within a Tibetan context.

Like my fellow contributors in this volume, I am not primarily concerned with illuminating hegemonic dynamics as they play out between biomedicine and its 'Others', in this case Tibetan medicine. Rather, in keeping with the focus of this book, my contribution provides a detailed, if somewhat subversive, illustration of how biomedicine is being shaped by its interactions with Tibetan medicine, and vice versa. I explore what Scheid (2002) calls processes of 'plurality and synthesis' central to contemporary practices of 'traditional' medicine, and examine how the maintenance of certain social and epistemological boundaries can help to resolve divides otherwise reinforced by normative conceptions of both 'religion' and 'science'. The *mendrub* ritual I describe serves as a contradistinction to models of 'integrative' medicine (cf., Baer 2004), and offers another gloss to the notions of 'complementarity' presented in Chaoul's chapter in the subsequent section of this book. In this sense, I am interested in both the possibilities for, and the limits of, translation across medico-social systems as represented through ritualized actions intent on ensuring or evaluating a medicine's efficacy.

The story around which this chapter is organized recounts a *mendrub* ritual that took place in Lhasa in the summer of 2004. The *mendrub* was

performed for one particular Tibetan medical compound that was the subject of the first hospital-based clinical trial of a Tibetan medical formula in the Tibet Autonomous Region (TAR), itself part of a larger research effort focused on maternal and child health in Tibet.[7] The ritual was sponsored by my Tibetan colleagues, some of whom practice both Tibetan medicine and biomedicine, and others of whom practice biomedicine exclusively. The ritual was performed by a *lama* of the Kagyü tradition, from a monastery not far from the famous Reting Monastery, in Central Tibet. While the performance of this ritual was viewed as an act of consequence by Tibetan colleagues involved in this collaborative research project, the *mendrub* remained inconsequential – invisible, even – within the RCT's protocol. I explore the implications of this invisibility in my conclusion. Here, suffice it to say that, through the unfolding of this ritual, we witness how pharmacological practices and clinical research paradigms can raise important questions about the fluid and shifting borders between 'religion' and 'science' in Tibetan contexts, and beyond.

Mendrub Rituals and Tibetan Praxis

Before presenting the story of the *mendrub* ritual, it is imperative to define some of the terms in question and provide some background. The term *men* most commonly means 'medicine' or 'remedy' in Tibetan language. The word refers to medical treatments or therapies, on the one hand, and to *materia medica* of all sorts, on the other. Yet *men* can also refer to substances that literally provide energy and power, such as batteries, or substances such as poisons or pesticides that might seem to be the opposite of medicines in the colloquial Western sense of term (Garrett 2009: 2).[8] *Men* also connotes the act of healing and is used to describe things that are beneficial in a general sense. The Tibetan word *drub* (*sgrub*, and its transitive parallel *grub*) possesses a similar multivalence: as a verb, it means to accomplish, establish or achieve, to make ready or perfect, to form; as a noun, it names affirmation, attainment and established existence. When combined, one way of understanding *mendrub* would be to say that it is the process by which a medicine is perfected, consummated, activated and made ready to heal. Frances Garrett translates the term with eloquence as the 'alchemy of accomplishing medicine'. Put most simply, many lay Tibetans and medical and religious specialists view *mendrub* rituals as a process by which specific medicinal ingredients are consecrated[9] or the efficacy of medicines is enhanced. However, as recent scholarship has

begun to reveal,[10] the history and complexity of this term, as well as the ritual texts and Tantric practices connected to it, indicate connections between Tibetan medicine and Tibetan Buddhism (particularly of the Nyingma tradition) of seminal importance, as well as notable points of interconnection between religious and medical domains in historical and contemporary Tibet.

Some *mendrub* rituals fall into the larger category of protective and long-life rituals (*kurim*) (Garrett 2007). Among some ethnically Tibetan communities, such as those in which I have conducted previous fieldwork in northern Nepal, *mendrub* take their place beside the other types of rituals that punctuate daily life: rituals for birth, long life and death; purification rituals by incense fumigation; rituals to liberate individuals from curses; rituals to overcome obstacles and increase wealth and prosperity, including good harvests; rituals to avert misfortune, summon good fortune, and to secure the health of humans and livestock (Kind 2002: 29). In these contexts, *mendrub* ceremonies are often elaborate community affairs, during which ritual specialists (sometime, but not necessarily medical specialists) produce, consecrate and then distribute special pills or other medicinal substances. The specific *mendrub* ritual is often followed by a long-life empowerment, called *tséwang*.[11] These *tséwang* ceremonies are performed not only for the benefit of the community in which they are enacted, and for the medicines that are the objects of the ritual, but also for the benefit of all sentient beings. At a deeper level, both in terms of textual history and Buddhist practice, *mendrub* rituals are connected to the Nyingma meditation cycles from the Eight Means of Accomplishment (*sgrub pa bka' brgyad*) tradition, and are associated with alchemical, pharmaceutical, yogic and contemplative realms of practice in Tibet (Garrett 2009: 4).

The performance of *mendrub* and the ritual texts that comprise this distinct tradition contribute to the spiritual accomplishments of individuals (including the cultivation of supramundane powers and elixirs of immortality) as well as the efficacy and potency of medicines and medicinal ingredients. These ceremonies also help to ritually produce a community, even as it takes a community – of ritual specialists and lay people – to sponsor and produce the event in a literal sense. Whether in settings such as a village monastery or a site of Tibetan medicine production such as a factory, a *mendrub* ritual usually lasts for one or two weeks and involves elaborate preparation. Propitiations are made to emanations of Sangyä Menla, the 'master of remedies' known also as the Medicine Buddha.

Offerings might also be made to a variety of tutelary deities (*yidam*), and to historical figures such as Yutog Yönten Gönpo, the Tibetan physician who is often viewed as the 'founding father' of Tibetan medicine, and whose biography and mytho-history contains accounts of the Tibetan medical tradition's appropriation of the *mendrub* ritual form. The ritual generally involves the recitation of *mantra* and other procedures, as described according to the *Yuthog Heart Essence* (*G.yu thog snying thig*). It is a standard requirement that all practitioners engaged in *mendrub* receive initiations (*wang*) and oral transmissions (*lung*) based on this text. Indeed, the textual history of the *Yuthog Heart Essence* marks this practice as one that is not primarily or exclusively about benefitting medicinal substances, but actually about benefitting the medical practitioner; it facilitates the practitioner's ability to generate or visualize a Medicine Buddha *maṇḍala* (*menla kyilkhor*) within his own body and increases his diagnostic acumen by cultivating the ability to see into patients' bodies (Garrett 2009: 7). Sometimes *mendrub* rituals include additional purification (*sang*) and fire offerings (*jinseg*), as well as the creation and destruction of a Medicine Buddha *maṇḍala* (often made of sand) in a prominent physical space. In addition to its esoteric implications for the practitioner – long life, miraculous powers or an understanding of the mind's true nature – the ritual serves to reinforce connections between the purity of a physical environment and the potency of medicine created in that environment.

Kind writes of a *mendrub* performed in Dolpo, Nepal, 'Apart from providing medicine which is especially empowered by the invoked deities, the purpose of the ritual practice follows a deep devotional idea' (2002: 38). The purpose of a *mendrub* performance, at this level, is to realize one's Buddha nature and the nature of emptiness (*tongpanyi*); to eliminate the 400 kinds of diseases, including those whose causes are *karmic* rather than a result of elemental and *nyépa* imbalance; and to transform the mental afflictions of cyclic existence – anger, desire, ignorance, jealousy and pride – into reservoirs of wisdom and compassion. The ritual provides both method and means, from a Tibetan perspective, of leading the minds of practitioners and patients away from the causes of suffering and towards its cessation.

At one level, then, we can understand *mendrub* as one element in the social construction of 'health care' in Tibetan contexts. But the ritual does something more. It also serves to transmute the physical substances of medicine – the earthly roots and minerals, leaves, branches and animal products – into *dütsi*, i.e., 'nectar', 'elixir' or 'divine ambrosia'. Indeed, one synonym for *mendrub* is 'transforming medicine into nectar' (*dütsi*

mendrub) (Garrett 2007). Through a process of ritual mimesis, the medicines or medicinal substances that are the object of empowerment come to embody extraordinary qualities, such as those ascribed to Aru Namgyal (Lat. *Terminalia chebula* or Chebulic Myrobalan), the 'king of medicines' that rests in the Medicine Buddha's offering bowl.[12] This process of empowerment and transformation bears out more general Buddhist principles to do with the nature of existence: at the level of conventional reality, the medicine retains its distinct biophysical composition; at the level of ultimate reality, the distinction between these particular medicines and the healing capacity represented by Aru Namgyal disappears.[13]

From what we know of Tibetan medical history, *mendrub* ceremonies were performed consecutively at Chakpori medical institute in Lhasa for several hundred years (Garrett 2007). During the Chinese annexation of Tibet, the performance of *mendrub* was forcibly halted in Lhasa in 1955; the ritual was resumed in 1987, during the era of 'reform and opening up'. To my knowledge, a *mendrub* ritual is performed annually at the premier state-run factory for Tibetan medicine in Lhasa, as well as at a number of other government and private Tibetan pharmaceutical factories throughout China.[14] An in-depth analysis of the reasons for this ritual's political rehabilitation, and how it relates to the *mendrub* I describe below, is a task being taken up by other researchers.[15] Here, suffice it to say that efficacy, value and potency – at once social and pharmacological – are ascribed to ritually blessed medicines, even as producers, practitioners and consumers of Tibetan medicine utter ambiguous messages regarding the importance of such rituals to the contemporary production of Tibetan pharmaceuticals (Craig and Adams 2009).[16]

I now turn to a narrative description of the *mendrub* ritual in which I participated, and which was performed for Zhijé 11, the Tibetan formula which was being used as one of two RCT study drugs, the other being the biomedical compound misoprostol. The narrative which follows is based on audio recorded field notes taken during the ritual itself, follow-up questions about the ritual with the religious officiants who performed it, and semi-structured interviews with several of my colleagues who also participated in the ritual. The dialogue is based on my translations of notes and interviews from Tibetan. All of the names, except my own, are pseudonyms.

A *Mendrub* Ritual in Lhasa

The *lama*'s raspy breath, his slow and steady corpulence, could be discerned from the third floor landing, where we waited, *kadhag* offering scarves in hand, stooped to receive this Buddhist ritual master. The office had been swept. The air had been purified with juniper incense. Had this been a regular day in our project office, the four cardboard boxes – each of which contained hundreds of uniform green capsules – would have been tucked away in the storage closet. The desk now given over to an altar would have been cluttered with teacups and a humidifier in the shape of a green plastic bunny. But the *lama*'s attendants, two shy and slender monks, had arrived well before their master and had readied the room for the *mendrub.*

Earlier that morning, my Tibetan office mates and I had helped the attendant monks prepare for the ritual. Tsokyi brought fresh blocks of tea and white butter. Pema ran home to fetch a large bag of *tsampa,* the ubiquitous Tibetan roasted barley flour, with which the monks would form ritual *torma* offerings. Tendzin returned from the hotel kitchen with large stainless steel pots, enough rice to fill offering bowls, and a jug of water. He gave the water and bowl to one of the monks, who then began kneading *tsampa* into pliant dough, good for moulding into *torma.* The other monk formed decorative discs out of butter. His brown palms flushed red as he submerged each ornament into ice cold water, so that that they might keep their shape through the afternoon. While the monks made *torma,* Minduk and I gathered up other necessary ritual objects: silver offering bowls and brass butter lamps, pre-filled with *ghee* and sprouting new wicks. The monks brought an offering pitcher and a peacock frond with which to sprinkle blessed water over the medicine and to offer each ritual participant, as well as a thunderbolt sceptre (*dorje*)*,* a ritual bell (*drilbu*), copies of the loose-leaved text (*pécha*) that outlined the empowerment ritual,[17] and, in typical Tibetan fashion, their teacups.

One of the monks asked if we had an image of Sangyä Menla to place at the centre of the altar. From in between the Tibetan, Chinese and English medical reference manuals, the midwifery handbooks and data collection forms that occupied our shelves, I removed a book of Tibetan medical paintings, the front cover of which depicted the Medicine Buddha. I placed the book on the altar. The monks positioned sticks of incense in each offering bowl, heaped high with rice and lit the butter lamps. Now, all we needed was the *lama*, Venerable Tashi Rinpoche.

Well before the *lama* began his careful ascent of the hotel stairs to our office, we knew he had arrived. Pema had been watching from the third-

floor window. He called to us when he saw the hotel porter stop traffic to assist the *lama* out of his car. The monk attendants ran downstairs to fetch their teacher. Each took hold of one fleshy forearm. The triad spent the next twenty minutes climbing the stairs. Like many Tibetan *lama* I have encountered, Tashi Rimpoche suffered from hypertension and arthritis, perhaps the net result of spending years with his legs crossed and being plied with thick butter tea and fried yak meat in thanks for his ritual services. He struggled for breath as he accepted our *khadag*. His words, if not his manner of speaking, were forced. 'I…must…rest…tea…please', he said, by way of introduction.

The *lama* settled in to the carpeted seat of honour we had prepared for him. He took a sip of tea and then seemed at ease. His enormous yet delicate hands unwrapped his copy of the ritual text, his sceptre and bell. In today's Tibet, it is difficult, though not impossible, to find a *lama* who is considered by his fellow Tibetans to be an authentic and knowledgeable religious practitioner, and also deemed politically correct by state authorities. Tashi Rinpoche was such a character. Although he had suffered during the 1960s and 1970s, he now enjoyed the relative comfort of movement between his rural monastery and an office in Lhasa. Within his rotund and laboured being, he had learned to balance political expedience with Buddhist practice, and he carried on the work of religious lineage with grace.

> 'So, where are the medicines?' Tashi Rinpoche asked Minduk, who had met the *lama* on several previous occasions, and had arranged for this day's event.
>
> 'Here it is', answered Minduk, pointing to the cardboard boxes. 'But there is only one medicine, Rinpoche.'
>
> 'Only one? Usually when I do a *mendrub* it is for many medicines – a whole year's supply for a factory or clinic.'
>
> 'I know. But this *mendrub* is just for one medicine called Zhijé 11. We are doing a research project about this medicine. This is the batch we will be using in the hospitals. Zhijé 11 will be compared to a Western medicine. Both are used for women's problems,' she continued, 'to help with the delivery of babies and to stop bleeding after birth.'
>
> As our resident Tibetan doctor on the project, Minduk explained as simply as possible the details of this five-year endeavour, funded by a U.S. agency, which would culminate in the first RCT of a Tibetan medicine in Tibet.[18] But instead of talking about the training in scientific research methods for collaborating Tibetan physicians, about the establishment, with our project's help, of the first Institutional Review Board (IRB) in Tibet, or even the groundbreaking work on informed consent which our Tibetan and American team had undertaken, Minduk began

an explanation of our project by addressing a specific source of suffering – the high mortality and morbidity rates for Tibetan women during childbirth – and the possible paths towards alleviating that suffering. In other words, she began with a moral imperative: the *dharma* behind what was often described, both to TAR officials and program officers from the U.S. agency, as a purely scientific endeavour.

'Rinpoche, as you know many women in Tibet die while giving birth, often from bleeding too much. Our project is trying to help fewer Tibetan women die. Jomo Menmo, a female adept of the *dharma,* first made this medicine more than seven hundred years ago. For many years it was used in Tibet's villages, given by doctors to pregnant women when their delivery times were near. Some people call it the "birth helping pill" or the "pain reducing pill". From Tibetan medical theory, we know the medicine helps the downward expelling wind (*thursel lung*). From a Western medicine perspective we can say it makes the uterus contract, which helps deliver the baby and the placenta. Maybe you have heard of Zhijé 6?'

'Yes', replied Tashi Rinpoche. 'I have taken this medicine myself, for digestion problems.'

'Exactly. When you add five more ingredients to Zhijé 6 – a common medicine – you arrive at Zhijé 11. This medicine is only used for women, so it is rare. Fewer people make it, or know how to prescribe it,' said Minduk. 'We hope that by doing this research, we can make Zhijé 11 in the best possible way in the future, and that we can make it more available again to women in rural areas. Now, many women do not have any help when they deliver. They are alone, with no medicines. This is part of why so many mothers die.'

Tashi Rinpoche nodded. 'What you say is true. It is also more difficult to find good quality Tibetan medicines in the countryside, or good doctors. We have the herbs, for now, but many people don't know how to use them anymore.'

Minduk nodded. 'Tibetan medicine is becoming more famous in the world, but without the proof that it works according to Western methods, by doing research, it will be difficult for *sowa rigpa* to help more people, even Tibetans. If we can prove [its effectiveness] through research, then our government as well as foreigners will believe the medicine works. They will trust it.'[19]

'But why only test one medicine?' asked Rinpoche. 'There must be others used to help delivery and help stop bleeding, and there are so many *lung* medicines.'

'According to Western science research methods, it is too hard to tell what medicine does the work of healing if there are many being given to the patient. So, we are trying to only look at Zhijé 11. Also, this is one of the few Tibetan medicines used in the women's department at Mentsikhang,' explained Minduk. 'They use mostly Western drugs, and the Western machines, like ultrasounds. But they are still using Zhijé 11, and this is one reason we decided to try.'

At the beginning of this research project – when we were still searching for a way to envision a clinical trial that would be acceptable to both our

Tibetan colleagues and the U.S. federal agency that was funding this work – one of the U.S. principal investigators (PI) noticed a bottle of Zhijé 11 sitting on a shelf in the Mentsikhang delivery room, beside vials of oxytocin[20] and other biomedical drugs. She asked the attending doctors what it was used for. They replied that it was used to aid and speed up childbirth. This medicine encouraged the delivery of the placenta, they explained, and helped the uterus to contract. Lengthy discussions between the U.S. PIs and our colleagues at the Mentsikhang ensued, and it seemed reasonable to deduce, or rather translate, that Zhijé 11 acted as a uterotonic, and that one of its indications was the prevention of postpartum haemorrhage (PPH). Given the extremely high rates of maternal mortality in Tibet – more than 300 per 100,000 live births, according to Lhasa Prefecture Health Bureau statistics – and the fact that many of these deaths are reportedly the result of PPH, the PIs latched on to this Tibetan medicine as a potential focus of our study.[21] After more than a year of background research, which included qualitative work about Zhijé 11's history, pharmacology and clinical use, as well as a first phase of baseline data collection on postpartum blood loss and obstetric practices in three Lhasa hospitals, the start of the clinical trial now drew near. Minduk explained this history to the *lama*.

> 'This sounds like a good project', he replied. 'But why have you not just gotten Zhijé 11 from one of the reputable factories, where they already would have done an empowerment ritual for the medicine? Are these special pills?' asked the Rinpoche, motioning to the boxes on the altar.
>
> 'Yes, they are special', answered Minduk. 'You see, we had to make a special batch of this medicine at the Mentsikhang factory to make sure that all the medicine that will be given to patients in the study is the same.' Issues of the standardization and quality control had been central concerns for the PIs and the U.S. funding agency.[22]
>
> 'We also had to change some of the ratios of ingredients used, to make the medicine have the best chance of working like the Western medicine', she continued. 'Many of the recipes for Zhijé 11 just add the five extra ingredients that change Zhijé 6 into Zhijé 11 in small amounts. They do not consider the reasons *why* each ingredient is added – what the real function and potency [of these extra five ingredients] should be to help women during childbirth. This is partly because so many of the books we follow today as 'official' recipes were written by monk-physicians, who of course knew nothing about women!'[23] Minduk paused. Her cheeks flushed red, embarrassed. 'Of course, these famous doctors were very knowledgeable in general, but…'
>
> 'It is ok', Rinpoche laughed. 'It is true what you say.'

'The monk-physicians of ages past knew the medical theories on women's health from the *Four Tantras* very well,' Minduk went on, 'yet their knowledge of women's diseases in practice was limited.'

'But why have you changed the form of the medicine? Is it not in the form of a *rilbu*?' asked Rinpoche, referring to the standard type of Tibetan medicine pill.

'No, the medicine is no longer a *rilbu*. You know *jiaonang*, "capsules"?' said Minduk, using the Mandarin word for this form of medication.

'Like the Western medicines for infection?' the Rinpoche asked.

'Yes, exactly. These days some people are making Tibetan medicines in this new form, so we decided to try. This was partly because our Tibetan medicine has to work more quickly than usual, in order to compare with Western medicine. So, we have made a powder form of Zhijé 11, and put this in the capsule. Powders are absorbed into the body more quickly than *rilbu*. But the change in the medicine's form is also because of Western research methods,' Minduk went on. 'This kind of research is called "blind". This means that neither the doctors nor the patients know what medicine is being given.[24] But the only way to make sure the doctor does not know which medicine she is giving is to change the form. That way, both Zhijé 11 and the *anweiji*, the placebo, look the same.'

Again, Minduk relied on the Mandarin word for 'placebo'. Indeed, the ability to translate the goals and structure of this research project between English, Tibetan and Mandarin Chinese required a degree of multilingualism and code switching that had as much to do with language itself as it did with translating ideas of 'science' and 'research' across cultural and historical, medical and moral boundaries (Adams et al. 2005a). At the most basic level, this attempt to translate Tibetan medicine into the language of Western science was an exercise in translating Tibetan medical epistemology into English; simultaneously, it required educating Tibetan doctors in Western scientific sensibilities, by way of Chinese biomedical terms.

'What is "placebo"? I have not heard of this word', said Rinpoche.

'In Tibetan it is called *semso men*', said Minduk. Literally, this meant 'medicine to heal the mind' and implied a substance that helped the patients 'not to worry' while they participated in research. Tashi Rinpoche took this explanation in stride, but was not fully satisfied.

'According to the teachings of the Medicine Buddha, every substance on earth has the potential to be medicine, to enable healing. If this no-medicine medicine puts the patient's mind at ease, then how is it not medicine?' he asked.

Ironically, the U.S. principal investigators had made similar comments upon hearing the Tibetan translation of the term "placebo" while we were designing the study protocol. 'We have to change the wording', they had insisted. 'Otherwise,

the U.S. IRBs will think we are telling subjects the placebo is some sort of anti-anxiety medication.' Although Tashi Rinpoche spoke from a very different socio-linguistic place than the U.S.-based MD and midwife/PhD who directed the research project, this question about what sorts of substances in what forms could be considered medicinal remained critical to Rinpoche as he prepared for the *mendrub*.

'From this view, the placebo *is* a medicine – a mind medicine', answered Minduk. She had been preoccupied with these issues for months now. 'But, according to Western science, we can't think of it as a medicine, because the material inside the capsules is just potato flour. The substance, in itself, has no medicinal qualities – at least none that we know of,' answered Minduk.

'Rinpoche, let us show you the medicine', interjected Pema. He had opened two of the cardboard boxes, pulled out a packet of identical green capsules from each, and removed an individual capsule from the two bags. 'See, they look the same on the outside,' explained Pema. 'But when you open them, they are different.' As Pema spoke, he pried apart one capsule and then the other, emptied out the contents onto the table in front of Tashi Rinpoche, and, in so doing, revealed the physical difference between them. The opaque green shell of the capsule masked the Zhijé 11 – a fawn-coloured powder that smelled faintly of ginger – and the white, odourless placebo powder.

'I see', said the *lama*. He cleared his throat and took a sip of tea. 'So, do you want me to bless only the Zhijé 11 or should I empower the *anweiji,* this no-medicine medicine, as well?'

My Tibetan co-workers and I looked at each other. We had discussed this question earlier, amongst ourselves, and had reached an agreement. Minduk spoke: 'Rinpoche, we would be happy for you to bless both. That way we will be giving the patients some benefit from the medicine *and* the placebo because any substance that has been empowered will have some effect (*nüpa*) and will bring some benefit.'

'This is my feeling, too', answered the *lama*.

For the next three hours, my Tibetan colleagues and I watched as Tashi Rinpoche and his attendant monks performed the ritual. Time was marked by soundings from the *lama*'s bell and the baritone resonance of his voice. Tashi Rinpoche's massive hands sliced through air as if it were water, fluent in his performance of *mudra,* meditative hand gestures. Rinpoche's ability to ritually imbue these medicines with efficacy was something he acquired not only through textual study. This authority was also the product of oral instruction (*lung*) and empowering initiations (*wang*) conferred by master practitioners on Rinpoche over the course of his religious training. And yet, unlike the much more elaborate *mendrub* held at the Mentsikhang

factory each year, this ritual had been pared down to its most basic elements: an altar was constructed; recitations were made; blessed water was sprinkled over the cardboard boxes and into our palms; the ritual wound down. Tashi Rinpoche instructed us to dim the lights. His attendants gathered up the *torma* and took them to the roof, where these barley and butter statues were offered to Sangyä Menla and tutelary deities; impurities or defilements that might have been present in the medicines were cast out through these actions.

As the patrons (*jindag*) of this ritual, my colleagues and I filled three envelopes with crisp Reminbi notes, in denominations that were respectful though not extravagant, wrapped the envelopes in *khadag,* and offered them to the *lama* and his attendants. We then retired to the hotel garden for lunch and conversation. The entire procedure took a morning. By mid-afternoon, the boxes of medicine were back in the storage closet. The book whose cover had provided our image of the Medicine Buddha was tucked into the bookshelf. All remnants of the ritual, save spilled offering grains, were cleaned, polished and put away; the grains would be swept up the following morning, during housekeeping rounds.

Efficacy, Meaning and Methods of Assigning Value to Medicines

Despite the simplicity of the ritual – or perhaps because of it – my Tibetan colleagues had felt obliged to sponsor this *mendrub.* They had little ultimate control over whether or not Zhijé 11 would be proven effective in biomedical terms, according to RCT methods, at the three participating Lhasa hospitals. The medicine's clinical effectiveness would be evaluated based on whether or not it reduced postpartum blood loss by factors determined 'statistically significant' through 'power calculations', in comparison with misoprostol, a biomedical formula that was also used to prevent and treat PPH.[25] My colleagues could, however, ensure that the first Tibetan medicine to be tested in such a manner in the TAR be vested with another type of efficacy, sourced not only from the potency of herbs and minerals, proper production methods and skilful clinical practice, but also from the syllables of *mantra* properly spoken, propitiations properly made.

My colleagues also decided that we should not inform the American PIs or our government partners in Lhasa about this ritual enactment. They were worried that these authority figures would not approve of the activity,

that it would be seen as a waste of time or, worse, as an act that marked this otherwise 'scientific' endeavour with the stigma of religion. Although permissions were now granted for *mendrub* rituals to be performed in state and private factories, religion remained a taboo subject in the interaction between governmental and NGO actors, for a host of historical and political reasons (cf., Adams 2001, Janes 2001). This reality had given my colleagues pause, at least initially.

Yet members of the Research Committee and the Tibetan staff on the project eventually decided that *mendrub* should be sponsored. Colleagues from Mentsikhang were particularly glad that this ritual would be performed. This was not surprising, as these doctors had more grounding in Tibetan medical praxis than their fellow Committee members who had been trained exclusively in biomedicine. In addition, the Mentsikhang obstetrics ward would be most directly impacted by the results of this clinical trial, for it was the only institution that prescribed Zhijé 11 as part of their standard of care. Also, although all of the committee members understood the rationale for using a placebo to make the research scientifically 'robust', many of them were not convinced that the 'placebo effect' did not, in fact, indicate some sort of 'real' healing. Nor were some of them fully persuaded that the use of a placebo was ethical.[26] Given this set of concerns on the part of the Tibetan staff and collaborating providers, sponsoring the ritual seemed worth the risk. As is often the case in Tibet, they reasoned that it would be easier to ask for forgiveness than it would be to ask for permission.

The ethnographic vignette recounted above not only outlines how one particular Tibetan medicine was moulded into an epistemological framework that would 'make sense' in the context of a clinical trial. Significantly, the story also illustrates the ways in which Tibetan medicine, and a Tibetan ritual form generally, can engage biomedical science, and, in the process, put into relief some of the cultural assumptions and practices embedded within RCT research paradigms. Consider the placebo-as-form, and as method. Tashi Rinpoche's initial confusion over the term *semso men* reflected larger concerns about what can be classified as an 'inert' or 'benign' substance. The dialogue between this Tibetan *lama* and Minduk, a doctor of Tibetan medicine who was also a primary collaborator on the development of the clinical trial protocol, illustrates the types of epistemological and methodological blinders required of an RCT (e.g., what counts as data, what it means if study cohorts who are given placebos respond to treatment in clinically significant ways, etc.). Even though the

lama and my Tibetan colleagues were quick to acknowledge the material differences between the Zhijé 11 capsules and their placebo equivalents, the very possibility of there being inert medical substances was called into question, not only by the performance of *mendrub*, but also by the perceived need – according to Western clinical research protocol – for a 'medicine to heal the mind' of patients who would participate in this study. As Moerman (2002: 10–11) notes, the etymological history of the word 'placebo' is rich, varied and filled with layers of meaning, from 'I shall please [the Lord]' (likely an ancient mis-translation of Hebrew by way of Greek and Latin), to the medieval English connotations of 'someone out to please others with artifice rather than substance', to more contemporary translations in the biomedical context, which pivot around ideas of the 'inert'. Significantly, this history is also a useful reminder of how the supposedly distinct fields of 'religion' and 'science' are deeply implicated in each other in Western traditions, as well.

The discussion about whether or not to bless the placebo capsules during the *mendrub* echoed more extensive debates about the ethics of placebo use in general, within the scope of this collaborative, cross-cultural research project (Adams et al. 2005a: 280–81). As such, these Lhasa-based conversations reflect broader concerns within both social and clinical sciences about the ethics of conducting clinical research in low-income and/or 'treatment naïve' settings (cf., Benetar 2002, Emanuel 2004, Petryna 2005, Petryna, Lakoff and Kleinman 2006). Both Tibetan medicine's moral epistemology (Craig and Adams 2008) and my Tibetan colleagues' understanding of the socio-economic constraints that many potential 'study subjects' – pregnant women in Tibet – faced in accessing health care made the idea of 'control' populations difficult for them to justify. They remained uneasy at first, despite the fact that Zhijé 11 and misoprostol were being given as prophylaxis against PPH, and even though, according to the RCT protocol, any woman who began to haemorrhage would be treated with the 'standard of care' in each of the three participating hospitals.[27]

Overall, the prevailing norms of Western clinical research continued to outweigh what could be construed as more 'localized' moral dilemmas about giving patients placebos. And yet, in part due to issues raised through the *mendrub*, and in part through continued discussions between Tibetan colleagues, the PIs and various IRBs, the final study protocol was designed as a double-blind, double placebo, randomized two-arm trial in which consenting subjects would be given either Zhijé 11 or misoprostol; no woman would only receive a placebo (Miller et al. 2009: 135).[28] In an indirect

sense, the *mendrub* ritual and the conversations it prompted about the purpose of clinical research and the nature of placebos encouraged project collaborators to revisit and recast some of the normative assumptions within the field of bioethics, and to raise perhaps more esoteric, but no less important, questions about different types and sources of efficacy.

In addition, through the act of ritually blessing both Zhijé 11 and the placebo, different valances on concepts such as the benefits of clinical research and measurements of efficacy were presented against prevailing ideas about the source of a medicine's curative power and the nature of a 'control' group. Although it was a practical impossibility at the time of the *mendrub*, my colleagues also discussed the potential benefit that could have come from blessing the misoprostol which was to be Zhijé 11's 'active drug' counterpart in the RCT. Had the shipment of these pills arrived in Lhasa in time for the *mendrub*, they would probably have been ritually blessed.

The purpose of the *mendrub* ritual was not merely to imbue only the Tibetan medicine with the best chance of performing well under altered clinical circumstances, within the RCT context. The *mendrub* also represented an effort to overlay onto what would be other highly ritualized processes – randomized, blinding, etc. – an element of potential benefit to participants that was at once socially valued and yet virtually absent from the official list of 'risks' and 'benefits' explained to women who became study subjects, as part of the enrolment and consent process.[29] In this sense, the *mendrub* echoed the strict and circumscribed processes to which 'study drugs' must be held accountable within the culture of biomedical clinical trials, processes which hinge on specific definitions of a medicine's 'safety', 'efficacy' and 'quality' – its clinical value. Like procedures to ensure such standards within biomedicine, the *mendrub* represented practitioners' concerns about remaining accountable to the lives of study participants, even as its performance reproduced particular domains, if not hierarchies, of social and scientific knowledge.

Conclusion

Data collection for the clinical trial itself began in August 2005 and concluded in March 2007, during which time more than 900 women completed the study.[30] Miller et al. (2009) report on the results of the RCT in detail. In their study design, the PI's predicted that misoprostol would have a greater overall effect in the reduction of postpartum blood loss than Zhijé 11. This hypothesis was borne out in the data, in that the frequency

of PPH was lower in the misoprostol group than the group who received Zhijé 11. However, mean and median blood loss was very similar between the two groups; rates of PPH fell over the duration of the study in both groups; and there were no maternal deaths among study participants (Miller et al. 2009: 138). In addition, side effects were more commonly experienced among those who received misoprostol, with fever occurring at statistically significant rates (ibid: 138). In their discussion, the researchers carrying out the study emphasized the methodological rigour and sheer number of participants in the RCT, as well as the combined qualitative and quantitative research which led to the creation of the study protocol. The relative efficacy of the Tibetan versus the Western study drug was narrowly defined, with reference to P-values. In conclusion, the researchers emphasized the need to make available to women in Tibet a 'reliable, safe uterotonic that is culturally acceptable and inexpensive' and to encourage future research aimed at testing the efficacy of traditional obstetric medications against allopathic preparations (ibid: 139).

In the end, within the context of the RCT, the *mendrub* was an invisible act. Had it been a more public event, it would probably not have raised any 'scientific' concerns, in part because biomedical science has such a limited vocabulary with which to engage such communal, even metaphysical acts. As with a shaman who might be invited to perform a soul-calling ceremony at a hospital bedside (Fadiman 1997), the *mendrub* would probably have been tolerated, but not considered significant, in part because the RCT protocol had no way to measure the difference between ritually consecrated and non-blessed medicines.[31] Any issues surrounding the ritual would probably have been political. And yet the *mendrub* was a pivotal moment in the RCT process: it helped to give voice to ethical concerns at the heart of a *sowa rigpa* philosophy of practice; it attended to lay conceptions about the power, value and efficacy of 'religious' ritual; and it highlighted the specific attributes, at once material and cosmo-physical, of empowered substances in a Tibetan context. In this sense, the ritual's invisibility – or rather the maintenance of certain epistemological boundaries between aspects of biomedical and Tibetan medical culture through the exclusion of the *mendrub* from official RCT protocol – was also a source of its efficacy.

The fact that the *mendrub* and the clinical trial were never put into direct dialogue illustrates one of the most fruitful lessons to emerge from this experience. The enactment of this ritual meant that an 'integration' of medico-social systems was not forced. Nor was there an attempt to institutionalize a sense of complementarity between a 'traditional' Tibetan

practice and the strictures of 'modern' science, circumstances which usually equate to a subordination of non-Western, non-biomedical praxes. Instead, both the ritualized acts inherent to *mendrub* and to the RCT occupied distinct spaces and, as such, enlivened and deepened a process of inquiry, each in their own way. In part because the *mendrub* stood on its own, my colleagues and I were also able to see more clearly the ways in which the RCT was also a cultural product, invested in its own ways of ensuring ritualized efficacy. After all, the next event that the packets of green capsules would be subject to was the performance of the randomization process, in which hundreds of envelopes would be marked with computer-generated numbers and filled, according to this biometric divination, with either Zhijé11 or potato starch. This ritual process of meticulous randomization would help to ensure, within certain bounds, that the RCT would produce clinically and statistically sound results; in great part, the clinical trial would only be valuable if such ritualized acts were performed with precision and care.

But what if the *mendrub* had not been invisible? What if not only the Tibetan medicine and the placebo but also the Western study drug had been empowered? And what if this fact had been shared with study participants? Might these factors have influenced the outcome of the trial, or even the willingness of eligible women to consent and enrol in the study? Would these factors have produced statistically significant results? These are questions I cannot answer, but are no less important to pose, particularly in considering how to structure future clinical encounters at the frontiers Tibetan and biomedical sciences.

Notes

1. I would like to thank Barbara Gerke, Frances Garrett, and my co-editors Vincanne Adams and Mona Schrempf for their helpful comments on earlier drafts of this chapter. A particular thanks is due to Mingji Cuomu and other colleagues who remain anonymous, with whom I worked on the Lhasa-based project.
2. For example, physician anthropologist Robert Anderson (1992) focuses on the difficulty of measuring the benefit to patients of traditional healing methods, and the problem with 'anecdotal' evidence of ethnomedical efficacy. He is most interested in discerning in biomedical terms whether or not non-biomedical healing praxes produce pathophysiological effects, arguing that the randomized controlled trial remains an ideal, but that observational studies are more practical. Waldram (2000) reviews much of the work to date on the efficacy of traditional medicine. He conceptualizes efficacy as a fluid and shifting concept, and one that is negotiated (and sometimes contested) in the context of a sickness episode. He

hones in on the idea of the 'double standard' in which non-biomedical therapies are held to standards of evaluation for efficacy that are not strictly adhered to by their biomedical counterparts. In chapter 2 of Whyte, van der Geest and Hardon's *The Social Lives of Medicines,* the authors expand on Etkin's (1988, 1992) work on the cultural construction of efficacy, as well as Moerman's work (2000, 2002) on 'meaning response' to articulate a broad conception of efficacy's social and pharmacological parameters.

3. *American Heritage Dictionary of the English Language*, fourth edition, retrieved on 24 August 2007 from http://dictionary.reference.com/browse/efficacy.
4. Moerman demarcates the 'meaning response' as that which follows from the interaction with the context in which healing occurs, in contradistinction to what he calls 'autonomous responses' which include all of the processes the human organism invokes in order to regain health or equilibrium, as well as the 'specific response' of the body to a specific medical treatment (2002: 16).
5. In addition to Moerman's contribution to the subject, other significant work on the placebo and placebo effect include Kleinman and Hahn 1983, Kaptchuk 2002, Etkin 1992, Harrington 1999, and Strauss et al. 2002.
6. While this perspective of the RCT as 'gold standard' remains a normative view, there are a number of critiques of this perspective, from a variety of disciplines. For example, Ted Kaptchuk's work on the topic (2001) provides a discussion of the methodological and epistemological problems of the RCT, particularly with reference to what types of evidence and causal data they exclude. The work of psychiatrist and medical anthropologist David Healy (1998) illustrates the ways in which clinical trials are 'produced' in a social and scientific sense, and how this relates to the interpenetration of scientific knowledge production and the marketing and sale of pharmaceuticals.
7. The bilateral grant was funded by NIH/NICHD and the Bill and Melinda Gates Foundation as part of the Global Network for Women's and Children's Health Research (#HD 40613). Although the ethnographic research presented in this chapter was not conducted as a direct component of this grant, I acknowledge these institutions and colleagues at the University of Utah, the University of San Francisco, the Lhasa Municipal Health Bureau, the Lhasa Prefecture Health Bureau, Mentsikhang, Lhasa Municipal Hospital, and the Maternal Child Health Hospital. See Adams et al. 2005a, 2005b and 2007; Miller et al. 2004, 2009; Tudor et al. 2006 for discussions of the research project and its outcomes. My ethnographic research was supported by grants from the Social Science Research Council and the Wenner Gren Foundation for Anthropological Research, whom I thank for their support.
8. It is also interesting to note that the term 'medicine' in English can also have a parallel multivalence. For example, phrases such as 'He got a dose of his own medicine' or the concept to 'take one's medicine' connotes punishment, negativity, and what we might gloss as 'poisonous' action.

9. By 'medicinal ingredients' I mean both the *materia medica* used in the creation of specific Tibetan medicines and those animal, mineral and vegetal products that are used to produce a variety of empowered substances within monastic settings, for distribution as various sorts of *dütsi* and *jinlab.*
10. Frances Garrett is currently conducting a long-term study of *mendrub* textual history and current practice in Tibet. Herein, I have drawn on scholarship in her articles 'Tapping the Body's Nectar: Gastronomy and Incorporation in Tibetan Literature' (2010), and 'The Alchemy of Accomplishing Medicine (*mendrub*): Situating the *Yuthog Heart Essence* Ritual Tradition' (2009) to help ground this practice in a broader historical and religious context.
11. The category of such consecrated substances is broad and can take many forms. In both textual and ethnographic contexts, these substances are described by many different terms, including blessing (*jinlab*), nectar or elixier (*dütsi*), and a variety of special jewel pills such as Mani rilbu rinchen nagpo, as described by Aschoff and Tashigang (2001).
12. It is important to note, however, that *mendrub* rituals can be performed to a variety of other deities aside from the Medicine Buddha. Gerke (personal communication) notes that Dudjom Rinpoche has conducted Vajrakīlaya *mendrub* rituals in Darjeeling, India. Garrett (2009) notes that the deity Dütsi Yönten (*Bdud rtsi yon tan*, Skt. Vajramrita), among others, is also featured in the *Eight Means of Accomplishment* (*Sgrub pa bka' brgyad*) practice cycles which are central to the *mendrub* tradition.
13. Gyatso (2004) presents a useful discussion of the distinctions between 'science' and 'religion' in Tibet, with particular reference to the relationship between medicine and mainstream Buddhist thought on what she calls the 'eve of modernity' (circa twelfth to nineteenth century). In this article, she provides a useful example of the type of epistemological dissonance that can occur within Tibetan medical practice over this issue of the relationship between empiricism and Buddhist revelation.
14. In collaboration with the Tibetan Digital Library (TDL) project, Tibetologist and scholar of religious studies Frances Garrett, has recorded the *mendrup* ritual at the Mentsikhang factory in Lhasa in 2001. This ritual was presided over by Tsultrim Gyaltsen, a member of the lineage of Yutog Yönten Gönpo. Footage of this event is available at http://www.thlib.org/avarch/mediaflowcat/titles_browse.php?media=all&transcript=all&presfilter=0&series=443.
15. Notably Frances Garrett. See Adams 1998, 2001 and Janes 1999, 2001 for relevant discussions of the politicization of Tibetan medicine in contemporary Tibet.
16. This ambiguity was particularly apparent during the SARS outbreak in China in 2003. See Craig (2003) and Craig and Adams (2009) for a discussion of the ambiguous nature of ritual healing and Tibetan medicine in relation to this biomedical epidemic. During the SARS outbreak in 2003, people were responding to Tibetan medicine at several levels, including, if not limited to, a reconfirmation of the power and potency of ritual process. Not only were people seeking out incense and black pills for their aromatherapy and anti-contagion effects; a new

currency – ritually prepared amulets, blessed pills, etc. – was also evident throughout Tibetan areas of the PRC.

17. This text was a portion of the 'root text' of the *Yuthog Heart Essence* (Garrett 2009). I was not allowed to photograph the *pécha* in question, but was given a photocopied excerpt from the Western book format version of the book, published by the Ngak Mang Institute and the Beijing National Publishing House (mentioned also in Garrett 2009) by one of my colleagues attending the ritual, who was a Tibetan doctor and a devoted Buddhist practitioner. I was told this photocopied excerpt was the 'same text' as the one used in the ritual. Whether or not this excerpt was entirely the 'same' as the *pécha* used by the attending ritual specialists is a question which unfortunately I cannot answer.
18. There have been other RCTs conducted on Tibetan formulas in China, India, the U.S. and Europe.
19. This comment resonates with idioms of 'proof' discussed by Adams (2002).
20. In its natural form, oxytocin is a mammalian hormone that is released after the distending of the cervix and vagina during labour. It also facilitates the 'let down' reflex in lactating women, and is released during both male and female orgasm. In its chemically produced form, oxytocin is used to induce and augment labour as well as to control postpartum bleeding.
21. By comparison, the U.S. maternal mortality rate is approximately 11/100,000 live births, while the rate for the rest of the PRC is approximately 45/100,000 live births (WHO 2007). Worldwide, between 500,000 and 600,000 maternal deaths occur annually, ninety-eight per cent of which occur in 'developing' countries (WHO 2004). This translates into just over one maternal death per minute.
22. See Craig (2006), chapter 4.
23. As I discuss at length in Craig (2006), the phenomenon of standard pharmacological ratios for ingredients in Tibetan medicinal compounds is a very new phenomenon; most historical medical texts name only ingredients to be used in a compound, rather than specific amounts of each ingredient, for Tibetan pharmacology allows for, indeed encourages – the tailoring of pharmacological compounds according to individual patient history or, in some cases, the substitution of ingredients based on *materia medica* availability.
24. See Adams et al. (2005a) and Miller et al. (2004) for a discussion of this process of 'blinding' in relation to the development of an informed consent process for this RCT in Tibet.
25. According to Tudor et al. (2006: 145), the hypothesis of this prospective double-blind trial was that '600 grams oral misoprostol is more effective than Zhijé 11 in reducing the frequency of an adverse primary outcome'.
26. Some of this controversy over the use of placebos in this RCT is discussed in Adams et al. (2005a).
27. All three of the participating hospitals gave intravenous oxytocin as standard treatment for PPH; fundal massage was also used. Following international standards, PPH was clinically defined as equal to or greater than 500cc blood loss.

28. This was possible, in part, because dosage practices varied for the Tibetan and Western medicines. While Zhijé 11 was normally given when a woman's cervix was fully dilated, misoprostol was normally administered immediately after delivery of the baby.
29. I say 'virtually' absent because in different versions of the informed consent document and protocol created by our team, 'future benefit to Tibetan women' was listed as one of the official 'benefits' of participating in the study. This is of course not the same as the idea of 'benefit for all sentient beings' that is articulated during *mendrup* and related *kurim* rituals, but it bears a certain resonance with such ideas, at least when articulated in Tibetan language.
30. My involvement in this multi-year, interdisciplinary research project began in May 2002 and ended in November 2004. Significantly, while Tibetan medical and anthropological expertise were sought out as essential to the project during the development of the study protocol, baseline data collection and pilot testing, such a marriage of clinical and social scientific expertise was not prioritized once the actual RCT got underway, with the exception of some follow-up survey data that was collected in relation to the informed consent process, and which was reported in Adams et al. 2007.
31. At the 2006 meetings of the International Association of Tibetan Studies, Jürgen Aschoff presented preliminary results from a study on precisely this issue, with regard to *rinchen rilbu*. These issues about the extent to which 'traditional' methods of production should be adhered to, particularly in relation to the production of *rinchen rilbu,* represent ongoing debates not only in factories of Tibetan medicine in China, but also within the Men-Tsee-Khang in India. On one hand, these issues speak to larger workings of identity politics between Lhasa and Dharamsala, particularly about who produces more 'authentic' medicines; on the other hand, they address broader questions about science, evidence and the translation of medical epistemologies across cultural divides.

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Part IV

Research in Translation

The chapters of Part IV are written by researchers and/or practitioners of Tibetan medicine, and, for this reason, make an enormous contribution to our understanding of how Tibetan medicine changes practices of science internationally. On one hand, these chapters provide some of the most direct claims about the relationships between Tibetan and biomedical theory. On the other hand, they are uniquely embedded within the perspectives they represent, whether it is that of the *Gyüshi* or of clinical oncology. In the actual practices of doing research, as we see in these chapters, it is sometimes easier to focus on the practical observational insights than on the larger implications of what the findings represent vis-à-vis competing or co-mingling traditions. In these chapters, we get original insights about the mutual shaping of intellectual and epistemological framings as theory and therapeutics are merged in the research setting.

Mingji Cuomu is a Tibetan physician who provides an analytical exploration of the notions and practices of research extant within Tibetan medicine, but from the perspective of a doctor, a practicing physician, trained at the Tibetan Medical College in Lhasa. Her chapter almost reads as a philosophical tract rather than a summary of scientific methodology, until one realizes that what she is identifying are the more overarching epistemological claims and possibilities about how to establish empirical truth within the Tibetan medical tradition. For example, when she talks about the inability to do clinical trials in a Western academic way, the specific points of departure are the conceptualization of diagnosis and the approaches to research that are appropriate for Tibetan medicine, which she calls a 'qualitative' approach. When she discusses the issue of a 'quantitative' approach to research, focusing on statistics, she argues for the need to examine such quantitative data on a case-by-case basis, because the conditions in Tibet do not lend themselves easily to good statistical information. Her chapter provides a sound summary of Tibetan medicine's basic theoretical framework and a useful set of insights that help to situate the chapters which follow.

In Chapter Eleven, Olaf Czaja considers the ways in which doctors of Tibetan medicine from Dharamsala's Men-Tsee-Khang are discussing and trying to negotiate a Tibetan equivalent for and translation of the biomedical notion of 'cancer'. His work is based on the proceedings of the 'Conference on Clinical Research in Tibetan Medicine' organised by the Men-Tsee-Khang in 1996, the recorded contributions and exchanges which were published more or less verbatim in 1997 by the same institution. Being very aware of the worldwide importance of finding a comprehensive cure for cancer, Tibetan doctors discussed how Tibetan medicine could make an unprecedented contribution in this field, and led them to elevate Tibetan medicine in the global rankings of scientific medical systems. By re-interpreting classical Tibetan medical texts, in particular the *Four Tantras* and the *Supplement* (*Lhan thabs*) commentary, they sought causes and symptoms from different Tibetan disease categories and etiological notions which they considered to match the biomedical notion of 'cancer'. These present-day Tibetan interpreters claimed that the authors of classical medical texts anticipated cancer hundreds of years in advance of its contemporary worldwide proliferation. They thus promoted the ability of Tibetan medicine to heal and even predict diseases that are almost incurable by conventional biomedicine. At the same time, it seems that many Tibetan doctors have only a very superficial understanding of the way in which biomedicine treats cancer while simultaneously stressing – as Kloos notes in Chapter Four – the unique importance of religion in Tibetan medicine. It is the latter point that seems to make the biggest difference in the way in which doctors and researchers of Tibetan medicine in exile and in China argue about the efficacy of their systems. In exile, Tibetan doctors try to prove how scientific their tradition is, even those aspects that are deemed "religious" by the consuming public. In China, the focus is mainly on science and the legitimising of medical theory (even theory based on religious concepts) as inherently scientific. Religion is overtly blended out or remains diffuse: it becomes a reference point in name only, with little underlying corresponding practice at the Mentsikhang institutions. Yet one wonders whether its sustained use in name actually carries meaning in the theoretical underpinnings of medical practice.

In places like the U.S., Tibetan medicine is often presumed at the outset to be more 'religious' than scientific, even while being brought into Western scientific frames of research that at times leave intact – or even promote – deeply religious practices. The final chapter of this section takes us directly into this issue. Alejandro Chaoul has been working in clinical research

settings in the U.S. on the benefits of Tibetan meditation for patients with cancer. His work is path-breaking, particularly for the commitment of his research approach to understanding the principles of psycho-physiological change attendant upon Tibetan meditation. Whereas much research in this area has treated techniques of meditation as a hermetic and essentialist therapeutic modality, as if the logic or theory behind the techniques were not simply ancillary but also insignificant in the research design, Chaoul's work attempts to move beyond this framing. In this essay, too, we find a research approach that understands complementary medicine as a mutually integrative effort, i.e., what Chaoul calls 'the scientization of yoga' and the 'yogification of science'.

This chapter brings up a central question regarding the way in which Tibetan medicine is situated between 'religion' and 'science', namely what is the role of practices that seem to fall more squarely into the world of 'religion' – such as pilgrimage, meditation, blessings, *mantra*, exorcisms – in the repertoire of Tibetan medicine? Frequently, it seems that much of the attraction among Westerners for Tibetan medicine, some of which ends up in clinical research, has been for the kinds of Tibetan practices that are spiritual rather than pharmacological. That has resulted in studies like this one. Medical research on meditation techniques in the Western setting usually emerge in the context of other kinds of clinical research on what is called "mindfulness" , including techniques of yoga. Yet in Tibetan cultural contexts, and within a *sowa rigpa* sensibility, meditation exists alongside other varied and multiple ritual practices. Their place among practitioners of Tibetan medicine is not uniform. The fact that the techniques of meditation described in this chapter emerge from a repertoire of *sowa rigpa* that encompasses not only mindfulness training but a way of understanding human physiology based on Buddhist precepts, shows how Tibetan medicine truly occurs in the space between 'religion' and 'science'.

The complexities of translating these concepts of meditation and spirituality in a way that works for clinical trials means simplifying and framing complex practices in clinical terms and in a way that could be overly dismissive of its underlying benefits. One worries also about the possibilities of underestimating the clinical outcomes and real world effects of meditation in such contexts, for the limitations on outcomes measures are those defined by biophysical and physiological indicators that reveal psychological indicators (sleep, stress, subjective reports of how one feels). It is harder to include things like reduction in tumour size, remission of disease, or rebalancing of given *nyépa* along the terms that a Tibetan doctor

would want to examine, such as whether the imbalance of the *nyépa* that lead to the creation of the tumours had been eliminated. One wonders, for example, if the focus of research on meditation as a psychological aid to cancer treatments were concentrated to the same degree on the effects of meditation on tumour growth at a cellular level, whether there would be a way to comprehend this in a language of meditation in a biomedical clinical setting. Chaoul's chapter and research go a long way towards overcoming these obstacles.

Chapter 10

Qualitative and Quantitative Research Methodology in Tibetan Medicine: the History, Background and Development of Research in *Sowa Rigpa*

Mingji Cuomu

Introduction

In the same way that the forefathers of Tibetan medicine collected all the best practices of other medical systems of their time[1] to enrich their own knowledge and practice, we, the researchers of today, must use whatever suitable testing techniques are available to assess the benefits of Tibetan medicine and its remedies through methods of internationally accepted investigation. This is of utmost importance for the future of this medical system.

The first step in this process, however, is to recognize the uniqueness and preciousness of our medical tradition. From this basis, we should strive to develop research methods that will respect and preserve the specificity of Tibetan medicine, while conforming to the rules and regulations of public health in our country [China] and to the general trends of public health in the world. In short, we must find a way to combine tradition and modernity. The present lack of quantifiable results about how and why Tibetan medicine is effective is what prevents a proper recognition of the unique qualities of our medicine. When it comes to evaluating the clinical results of any 'traditional' medicine such as Tibetan medicine, one should use modern scientific methods, in line with the prevalent wish for standardized scientific measurements and with the rules and regulations of our government's medical administration.

Modern scientific methodology relies on two main research approaches: the qualitative and the quantitative method. I argue that in the evaluation of Tibetan medicine, the first step should be a qualitative phase of research to identify the elemental composition of whatever is being examined, and that this stage should be conducted according to the logic and methods of Tibetan medicine itself. The second phase should use a quantitative research methodology to test the findings obtained through the qualitative method.

If we manage to conduct research in such a way, we will be able to preserve the transmission of our forefathers who gave us the means to relieve the suffering of others. The exceptional qualities of Tibetan medicine should become known and evident to all. Tibetan medicine would gain international renown, not just as a remote and inscrutable tradition but as a translatable approach to healing that could be known scientifically and also contribute to the growth of scientific medicine. This would bring immense benefit to many people everywhere and also help to improve the resources of Tibet and the livelihood of its people.

I make these comments and implore that this type of work be undertaken from the dual position of being both a Tibetan medical doctor, and a student of the social sciences in the West. After studying Tibetan medicine as well as acquiring a basic knowledge of Western medicine for more than a decade, I have been a practitioner in a county level Tibetan hospital as well as in a prefecture Tibetan hospital for seven years. I have also participated three times in international clinical trials, over a period of five years. I have taught Bachelor degree students for three years, and completed my Masters degree in Tibetan medicine. I am currently a doctoral student in anthropology at Humboldt University, Berlin. Therefore I may say that I have had the opportunity of learning about and gaining experience from medical, public health and social science perspectives, and methodologies.

Many of these key areas of possible benefit and substantial challenges to conducting qualitative and quantitative research on Tibetan medicine became clear to me while I was working on the NIH-funded clinical research project (cf., Craig, this volume). As a Tibetan medical doctor, I am keen to find a way to engage in Tibetan medicine research in ways that are not only suitable to the modern scientific manner of explanation or understanding, but also for Tibetan medicine theory and practice itself. In considering ways of conducting research on Tibetan medicine, we need to determine the key points that we need to use and examine, and in which way we might combine Western medical research methodology with Tibetan medical approaches, so that we may guard against losing the

Tibetan medical character as well as retaining medicinal efficacy. In other words, we must try to find a proper bridge truly based on Tibetan medical theory and then analyse the results of this data collection using statistical methods.

In order to contextualize this idea, it is necessary to present some of the historical insights as well as the constraints of *sowa rigpa* as a medical and a cultural system.

Historical Insights and Constraints in Tibetan Medicine

Like other Tibetan sciences devoted to caring for the welfare of others, including the religion, Tibetans refer to as 'inner science' (*nangs rig pa*) of Buddhism, Tibetan medicine shines with the vivid brilliance of a falling star illuminating the sky. For over 2000 years medicine has been practiced in Tibet and has existed as a body of knowledge with the unique particularities of its land and of its historical background.[2]

In the mid-twentieth century, Tibetan society underwent radical changes, which also affected Tibetan medicine and its practice in Tibet. Initially established in 1916, the Mentsikhang, a hospital fully dedicated to Tibetan medicine, eventually incorporated the small medical schools that existed independently prior to its creation, and several medicine factories were created as well. During the 'reform' period of China's modern history, beginning in 1980 in Tibet, medical schools were founded, both at college and university level, in order to train those who would carry on the transmission of this medical science. Throughout the modern period, the number of people involved with Tibetan medicine has greatly increased, just like the waters of a Tibetan lake rise after the heavy rains of summer.

Western medicine itself has evolved from the humoral basis of traditional Greek (Galenic) medicine. As a result of technical advances, it has made tremendous progress. Now, Western medicine has spread everywhere in the world. In our society, where the old traditions of Tibet and the modern medicine of the West began to work jointly to ensure the health and well-being of people, the particular qualities of each one have been clarified through their relationship with each other. In the course of this parallel development, in which each system has applied quite different remedies and techniques to treat their patients' illnesses, they have shown a capacity to complement each other. Furthermore, the weak points of the

two systems have been immediately highlighted by the strong points of the other, creating a very positive process which has led each one to adopt those good qualities of the other which were compatible with its own principles. This has brought a sense of common progress to both disciplines, which is an excellent way to raise the level of knowledge of humankind. This complimentarily exists not only through research but also through clinical practice and in the medical pluralism of how patients seek out care. For instance, for some emergency cases, such as people who suffer from high fevers or trauma injuries, many Tibetans favour the use of Western medicine rather than Tibetan medicines. But for chronic diseases such as diabetes and hepatitis they prefer to use Tibetan medicines rather than Western medicine. This is because a particular Tibetan medicine may have a variety of different uses. For example, one ingredient in a particular remedy may serve to protect organs, some ingredients may help to remove or cure a particular point of imbalance and others may adjust the overall imbalance. Therefore, the disease is cured by a correction of the body's dynamic force. With this method there are almost no side effects.

With its 2000 years of history, Tibetan medicine comprises a complete body of theoretical knowledge, which we owe to the brilliant intelligence of our forefathers, and a corpus of excellent practices. Yet if Tibetan medicine is to shine as one of the finest medical systems of the world, we need good practitioners: people who, first and foremost, can be worthy recipients of this transmission of knowledge, but who can also disseminate it and make it progress in a way which is beneficial to mankind.

Even though Tibetan medicine can be appreciated as scientific in its own unique way, we still have not yet established a standard terminology for engaging with Western medicine, particularly for describing research methods. In order for this to take place we still need to make an effort to develop a common language that is more suited to today's world. To achieve all of these goals Tibetan medical institutions must encourage the sort of doctors who are not narrow-minded or timid, who do not just keep on repeating, like a *mantra*, the phrase 'We must inherit the tradition of Tibetan medicine and develop it', without much underlying substance. Rather, we need to support people who will take on the legacy of their forefathers and strive to develop it in accordance with the general development of knowledge in their society at that particular time. They should first examine the logic of Tibetan medical system and, on the basis of that, make progress in their research using whatever modern methods are compatible with *sowa rigpa*.

I now turn to a more detailed discussion of how such a methodology may be imagined and put into practice.

Developing Clinical Research in Tibetan Medicine

In the Tibetan tradition, when we want to examine any sort of idea, we proceed in three steps. The first step is a presentation of the fundamental logic of the subject. The second step involves quoting authoritative works as a reference for one's own ideas. The third step consists of proving this idea in practice. Applied to the medical context, this means demonstrating the validity of the idea in accordance with medical theory, observing the medicinal effectiveness step by step by using traditional Tibetan medical diagnostics and making note of empirical evidence. At the same time, we can conduct clinical trials, by which I mean empirical evaluations of clinical diagnosis and treatment outcomes based on Tibetan medical diagnostic standards in comparison with biomedical diagnostic standards. As important as such clinical research projects are, they can raise points of conflict. The types of evidence gathered through clinical drug testing is aimed to provide information about the safety and effectiveness of medicine sand to gain the recognition from levels of health care and pharmaceutical administrative bodies. While these are important goals, if the emphasis of clinical trials on Tibetan medicine is only or primarily to satisfy modern regulatory requirements or show how Tibetan medicine works according to biomedical ideas and concepts, this will place Tibetan medicine in a dangerous position in which its original character is threatened. This sort of clinical evaluative process can reveal only a part of the function of the medicine which it aims to test. In more traditional Tibetan approaches to this endeavor we call 'clinical research', the main method has been to prove that an approach has worked by way of simple observations. This traditional approach has worked well in its own context but, understandably, knowledge and our methods have to adapt to the times in which they are applied.

At the present time, all research on medicinal substances in China must follow the standards laid out in the rules and regulations set by the health and drug administration. In addition, the development of Tibetan medicine must be in line with international trends and regulations of medicine in the world. This means that when it comes to testing an idea in practice, modern scientific tests should also be run alongside Tibetan medical tests.

Therefore, clinical research in Tibetan medicine should develop in two directions. Individual researchers and practitioners should have the latitude to develop research questions and apply them to clinical practice, and yet this should also be done alongside a variety of more ‘objective’ or ‘technical’ processes afforded to us through collaboration with Western science. However, this approach demands that we ask the question: What is the relationship, if any, between these two approaches and the knowledge they generate? I argue that the object of investigation is the same for Tibetan medicine and modern medicine but the methodology is different in each case. With Tibetan medicine, it is understood that the body, the disease and the remedy are of one and the same nature and therefore interrelated. This overall understanding is then gradually applied to more and more specific points. Such a method goes from the general to the particular. In modern medicine however, the smallest particles of matter, the various forms of illness, the effectiveness of medicines are analysed by means of biology and chemistry and through scientific testing. As such, this method moves from the particular to the general.

This idea of moving between general and particular types of knowledge relates directly to how I understand, and argue that we should make use of, both qualitative and quantitative methods.

Qualitative Research and Tibetan Medical Theory

One of the key words that I use very often in this text is ‘qualitative’ and so I would like to explain what I mean by ‘qualitative research methodology’. Generally, qualitative research methods are more commonly used in the field of social science than in natural science. They answer the questions about ‘what’, ‘how’ and ‘why’. (Green and Thorogood 2005). Unlike quantitative research, which relies on models, hypotheses and the use and interpretation of statistical data, qualitative research is more interested in the reasons behind specific actions. In relation to medicine, qualitative research can explore the experience of doctors, patients and therapies at many levels. However, when I speak of ‘qualitative research’ in Tibetan medicine, I am referring to analysis of specific topics based on the concepts and principles of Tibetan medicine to see whether the hypotheses follows the logical inference that is required in Tibetan medicine. This allows researchers to frame questions, develop tools and analyse data, and explore the particular results in terms of Tibetan medical theory. Here, qualitative research does not preclude recording and analysing quantifiable data, but it

provides a straightforward hypothesis which is developed according to element-based analytic models in Tibetan medicine. In this sense, the word 'quality' is at the core of what I mean by 'qualitative' research. It is a way of collecting data, and then describing and analysing that data, which does not reduce Tibetan medical experience to Western medical terms. For Tibetan medicine has its own complete medical system. This system examines the various dynamic laws of the elements of earth, air, fire and water, with space as a fifth element, pervading the other four. Tibetan medicine examines how they relate to each other when a patient is in a healthy state, and how they influence each other when the balance is lost. The system also maps the effects of medicine, which also consists of these elements in relation to the circumstances of the disease. Each of these discernments involves making judgements on the natures and qualities of things: of a patient's pulse and urine, of the balance of elements, and of a particular medical formula. As such, I call this procedure qualitative research in the context of Tibetan medicine. However, before discussing further research approaches I think it is important to look more closely at the general epistemology of Tibetan medicine in order to have a holistic picture.

The theory of Tibetan medicine is essentially based on an understanding of the nature of the five elements (*jungwa nga*) of earth, air, water, fire and space. This theory considers the universe as an environment containing all living beings. Among them, human beings represent the most accomplished form of life since, in the absence of illness, they have the capacity to live long and, even if they get sick, they can be treated and life-threatening conditions can be counteracted. In short, human beings possess the ability to achieve their own happiness, temporary and ultimate, and to facilitate such happiness in others.

All things in the universe arise or exist through the interplay of related causes and conditions (*tendré*). Whatever phenomenon we examine closely, we will find that it comes into existence, lives for some time and finally disintegrates, and all this happens exclusively due to the various ways in which the five elements come together and separate. All of these processes occur within the law of causality (Skt. *karma,* Tib. *lä*), which states that any given cause will unmistakably bring its own specific result.

The true, essential nature of beings is perfect clarity, completely free from mental complications, yet sudden passing impurities, with no true reality, crystalize into dualistic thinking: me and the world of objects and others. This gives rise to reactions: I want this, I do not want that, I am indifferent to this other thing. These three basic feelings – desire, hatred or ignorance, also called

the 'three negative emotional forces' (*dugsum*) – motivate the actions of beings. As a result, beings everywhere in the universe have bodies, which are the physical manifestations of their former actions (*tarnang trüpa*). The 'three negative emotional forces' generate what are called the 'three dynamics' (*nyépa sum*) and, through the play of interdependent causes and conditions, these become the basis for birth. These three *nyépa* are often, incorrectly, translated as 'humours' in Western writing about Tibetan medicine.

The human body, like the whole universe, is made up of the five elements. According to Tibetan medicine's view of physiology, when applied to the body, the elements take the form of the three *nyépa: lung* (which has the quality of movement), *tripa* (which has the quality of warmth energy), and *péken* (which has the dual qualities of solidity and liquidity). Again, the element of space is pervasive. These three *nyépa* are both the basic constituents of the body and the dynamic forces behind all its functions. When the elemental balance is right, they work together in harmony; they are said to be in their 'unaltered state' and the body enjoys good health and well-being. But when the elemental balance is disturbed, they enter an 'altered state', i.e., health is lost and sickness sets in. The three elemental agents are the source of health when they are unaltered and the cause of sickness when they become altered. *Nyépa* are more accurately called the 'three harms' because they have the potential to harm the body through imbalance leading to sickness. In the physiology of Tibetan medicine, they are even named the 'harm-doers' or the 'aggressors' (*nöjin*), whilst the body is presented as their potential 'victim' (*nöjä*).

Since all beings in the universe are made of these elements, Tibetan medicine texts elucidate their essential characteristics and functions in great detail, along with the way in which human beings are born, live and die: how the body is first formed and, subsequently, how it lives (its anatomy and physiology), how it can become afflicted by 404 different sorts of sickness when the elements start working against each other, and how the body finally falls apart. Similarly, our environment is formed out of the five elements: space, wind, fire, water and earth, in this order. The properties of the elements are clearly visible in our external world, which is the support of human life. To sum up, in the world and among the living beings it contains, all things are made of the elements. They all come into existence and disintegrate, and depending on the beneficial or harmful effect of their elemental combinations, they will be defined as 'medicine' or as 'poison'.

Although this is the standard outline of Tibetan medical theory, experience shows that this notion is not entirely fixed and immutable. For

example, aconite is a famous poison, but if one knows how to use it, it can become an elixir of immortality and cure infectious diseases, fevers and inflammations. On the other hand, milk, which is well known for its nutritious qualities, is a violent poison for snakes. Likewise, when foods that are elementally incompatible (*khazä mitröpa*) are eaten together, they can become a poison for humans. Therefore, it is imposible to define a substance that is posion or medicine in an ultimate sence as the potency of the substances are determined in accordance with particular effective objects. Through such very close investigation, the nature of things in the external world and in living beings was established with absolute certainty. More specifically, since Tibetan medicine views the body, the sickness and the remedy as all of one and the same nature, it was established that any single thing can have a range of different effects. These points are explained in very extensive works and in summarized commentaries, which are accessed according to the abilities of each individual Tibetan medicine practitioner.

The Place of Tibetan Medicine in the Classification of Sciences

The theoretical basis for Tibetan medicine, then, raises several questions about the relationship between Tibetan healing science and modern science. Does *sowa rigpa* belong to the 'natural sciences' (*rangjung tsenrig*) or the 'philosophy of nature' (*rangjung tsennyi rigpa*)? Depending on how we classify Tibetan medicine, there are different ways to analyse and evaluate it in practice. Although knowledge in general tries to embrace its objects as a whole, it is also necessary at times to approach particular aspects of it in a more specific way.

Traditionally, Tibetan studies are divided into five main disciplines known as the 'five branches of knowledge' (*rignä chewa nga*). These are as follows: study of 'creation' (*zo rigpa*) – the causality and interdependence which gives rise to the various phenomena; 'healing' (*sowa rigpa*) – intelligent interference in those causal processes to reduce suffering and produce desired outcomes; study of 'language/grammar' (*dra rigpa*) – finding a precise language to express the above; 'logic' (*tséma*) – finding a correct method for using language in intelligent communication and criticism; and 'inner knowledge or spirituality' (*nangpa rigpa*) – a profound investigation of the mind and consciousness. Tibetan medicine represents the second branch of knowledge with particular focus on the interactions

of the various natural elements of which both the human being and the universe are composed.

A central concern within Tibetan science is the notion of the human duty to help others, in other words compassion. The Tibetan tradition is rich in teachings on how to fulfil one's own wishes and those of others in order to gain freedom from physical and mental sufferings. It employs various techniques which envisage a human being through the three main areas of the physical body, the power of speech (communication) and the mind. How do these different disciplines mutually interact and function as a whole? Let us see how Tibetan medicine and the study of Buddhism address this question.

Tibetan medicine studies the function and quality of the elements of nature, but with an emphasis on the physical. Buddhism is rather a study of the source of these elements, observing the relationship between mind and matter, with a view to obtaining release from the different kinds of physical and mental suffering. It puts most emphasis on mind (wisdom) as the way to achieve this end to suffering. The heart of this wisdom, according to the Mādhyamika (or 'Middle Way' philosophy), lies in a frank discernment between the innate reality of life's phenomena, on one hand, and the presumptions about them in the (observing, subjective) human mind, on the other. The way in which the world of things is perceived in our minds is described as being not intrinsic but rather 'mere appearances, devoid of any reality' (*tongpanyi*). Much is made of this difference. According to Nāgārjuna's *Fundamental Wisdom of the Middle Way* (Garfield 1995), the untrue nature of what seem to be fixed realities is established through understanding that phenomena are manifest in dependence upon preceding causal influences; phenomena exist in their present state only as interdependent of their own component parts and/or attributes. These phenomena, which appear on the screen of our experience, are also dependent upon our sensorial impressions and subsequent verbal and conceptual designation of them.

In light of the above, both mind and the phenomenal world are generated by the continual transformations and interactions of the prime elements of nature. These take place according to their own dynamic laws, in a logical way but on many different levels, which in Western medical terminology may equate in part with physiology, neurophysiology and psychology.

In Western terminology, disease equates to pathology and medicines to pharmacology, also including aspects of mineralogy, botany and zoology. Of course, all of these disciplines are dependent upon fundamental sciences such as chemistry and physics. A yet deeper sense of the common ground

shared by the physical body, medicine and disease – as well as the actual nature of each of these – is found on the very finest level as primal matter, movement, bonding, energy (both innate and released) and time and space. These universal components of all realities have been metaphorically expressed for over two millennia in Buddhism and Asian medical sciences as the 'omnipresent elements' of earth, wind, water, fire, time and space. As none of these can be divorced from the mental experience of them, the 'element' of consciousness pervades all other elements.

In general, science is knowledge about the structure and behaviour of the natural and physical world, based on facts that you can prove empirically, for example by experiments. Tibetan medicine is also a knowledge system that analyses the interaction and interrelation between the inner and the external world. Described in another way, it is a detailed explanation of how the body, the remedy and the disease are interrelated and react upon each other at any given moment. As it is said in the *Gyüshi*, the body of sentient beings is shaped by the elements; disease, the object of treatment, is caused by these elements, and the medicinal ingredients of the remedy also contain the qualities of the elements.

So these two traditions, Tibetan science and Western science, use different methods to observe the laws of nature in order to define the same object. For example, when we see a table from different angles, even though we may get several different impressions, in the end we will still consider it to be a table. Moreover, the two systems share a common goal, which is maintaining health and preventing sickness if possible. Whenever the situation of a given person's health changes, one can use the methods of diagnosis and treatment that are part of the form and structure of Tibetan medicine with its many disciplines, including physiology, pharmacology, anatomy, etc. These usually give similar results to those found in Western medicine or other natural sciences. Many examples are described in various texts illustrating the obvious similarities and differences. Therefore I feel one could say that Tibetan medicine may be considered to fit the category of natural science.

Yet, Tibetan medicine has several unique features. First, results are not always measurable in a visible way. For instance, a pulse cannot be measured or classified in the same category for everyone, as every individual has his or her own genetic form and acquired mental and physical system. It is impossible from a Tibetan medical perspective to quantify all such subtle phenomena. Nonetheless, there is a shared common theory capable of examining the laws of nature, when required. Second, all the branch

specialities of Tibetan science could be included within one subject and be set out within one framework in which a number of different subjects are interacting. As detailed above, the first branch of Tibetan science is the discipline of 'construction or creation'; the second branch is the 'science of healing'; the third branch is the 'science of words' or linguistics; and the fourth branch is the discipline of 'logic', which further illuminates the fifth branch, 'inner knowledge'. Within this framework, any kind of knowledge is related to the dynamics of the elements, and every kind of knowledge has been shaped through its own causes and conditions. Therefore, there is a universal law (e.g., *karma*) that shares a common logic underlying all Tibetan sciences, from the more material to the more esoteric.

Tibetan Medical Research and Practice: History, Challenges and Opportunities

The study of Tibetan medical texts derives primarily from the *Four Tantras* (*Gyüshi)*, a unique theory of the healing science whose origins are said to go back to an emanation of the Medicine Buddha, Yutog Yönten Gönpo the Elder. Owing to the outstanding clarity and purity of his mind, this text provides a comprehensive understanding of the physical body of human beings, of illness and of treatment. The underlying insight is so profound that in many respects this theory goes deeper than current scientific research allows.

For generations, many doctors of outstanding intelligence who had knowledge of both Tibetan traditional medicine and Buddhism used their background as a basis to deepen their understanding of the *Gyüshi* itself and to develop both the theory and the practice of Tibetan medicine. With the experience of over a thousand years of dealing with high altitude and other diseases, which come from living in a unique landscape with a particular lifestyle, and through their knowledge of more common diseases, these well-trained Tibetan doctors who held traditional lineages wrote many valuable medical works and commentaries such as the *Crystal Sphere Crystal Rosary* (*Shel gong shel phreng*).

From early times until the twentieth century, the pattern of medical practice in Tibetan society mostly emerged through individual doctors, holders of a particular medical lineage. This is why until quite recently, medical education was handed down mostly through the private education of students, in particular through each doctor teaching his (or her) own

children or other family members. Each doctor had to manage by himself all the following areas: collecting medicinal herbs and ingredients from different sources, making medicines, treating patients. He also had to gain a deeper understanding of the medical texts so as to be able to do his own research. This involved keeping a record of his clinical practice, formulating new medicinal compounds in order to treat difficult chronic diseases, writing medical texts and so on.

However, Tibetan medical history does record the existence of a few medical schools, such as the one established by Yutog Yönten Gönpo the Elder in the eighth century, and another very famous one known as Chakpori which was founded in 1696 by the regent Sangyä Gyatso in Lhasa. However, the students who graduated from these schools could not fully answer the health needs of society.

Around the mid-twentieth century, given the major changes in socio-political and medical administration and government in Tibet, the first Tibetan Medical Hospital, or Mentsikhang founded in 1916, incorporated the existing medical schools under its administration. In 1989 the Tibetan Medical College was established in Lhasa with several specialized departments, such as a medicine factory and research departments within a larger unified framework under the auspices of the Ministry of Health. The administration of the hospital also uses Western medical techniques for modern testing methods and for special treatments applied through different departments such as gynaecology, paediatrics etc. These are partly influenced by Western medical knowledge and diagnostic methods. Here people learn how to use equipment for monitoring blood pressure, for instance, and other biomedical technologies for diagnosis. At the same time, taking Tibetan medical theory into consideration, they observe and interpret how these new approaches fit into the Tibetan medical perspective. In particular, some doctors with good training in both Tibetan and Western medicine are able to compare the two systems and find points which fit in with the Tibetan way, and subsequently write about their findings in articles, books or theses.

In 1998, after the publication of a new policy document which was to separate the administration of medicines from that of hospitals, the Tibet Autonomous Region (TAR) established an administrative department to control the production of Tibetan medicines. Since that time the production of medicines has passed through several experimental controls in order to come into line with normal marketing procedures. As a consequence, the whole administration of Tibetan medicines has

undergone a fundamental transformation by separating prescription from the production of the drugs.

Tibetan doctors hold different views about this transformation in production. Some stick to their own medical perspectives and do not accept any new ideas. Others take the opposite view, preferring to learn about Western medicine which they find easier to use and to understand. Furthermore, some students of Tibetan medicine prefer to follow a 'traditional' approach to research and advanced study. Others feel they would like to bring in biomedical ideas about medicine, health and the body to supplement Tibetan medical theory in order to illustrate the differences of views and make comparisons. Therefore, there is no unified view about how to deal with the issues of new production methods for Tibetan medicines, or with the question of research design and methods; the same is true of the generation of new medical knowledge, or the format for writing medical theses which strive to be compatible both with Western scientific research methodology and Tibetan medical theory and method.

To take an example of the impact of these changes, the arc of professional training and related curriculum is not the same as it was historically. Staff members have to remain within one department in order to become a doctor, a teacher or a pharmacist, so it is very difficult to acquire varied experiences in order to be a qualified general practitioner. Someone who has good teaching skills and a good knowledge of the theory will lack clinical practice and know very little about the production of Tibetan medicines. This makes it very difficult to carry out research on different levels and funding is extremely limited. All the staff are subject to decisions taken by the heads of their departments. In addition, as medicines are produced in the medical factory, there is no longer any need for each doctor to be directly involved in the production of medicines. Some things are made easier but others more difficult, such as treating chronic diseases for instance that require individual adaptations of the medicines according to an individual's constitution and the course of the disease.

In other instances, a person might have plenty of experience in the making of remedies but lack clinical experience and would have no idea of how to select the different medicinal ingredients. For example, in the making of one particular medicinal compound, several subtle variations of ingredients might be possible which could make a slight difference in how the disease is treated, in the efficacy of the prescription. Therefore a movement is now developing to try to consider how ingredients could be classified on the basis of individual requirements. If this could be achieved,

Tibetan medicines would become more useful when prescribed for individual patients. To these ends, we should develop sensible guidelines for research that are theoretically suitable for the use of research into Tibetan medicine. Of course it is essential to establish a separate research department, but, ideally, all the researchers should have a holistic knowledge of Tibetan medicine. Without an overarching, theoretically grounded understanding it is impossible to offer new contributions.

Here it is useful to comment on one of the two clinical research projects with which I have been involved. This project was sponsored by the U.S. National Institutes of Health and the Bill and Melinda Gates Foundation through the Global Network for Women's and Children's Health Research, and which culminated in the clinical trial of a Tibetan medicine versus a Western medicine for the prevention of postpartum haemorrhage (Craig also discusses other aspects of this clinical trial in her chapter in this volume). During my involvement in this project, I personally gained much knowledge about biomedical approaches to research methodology. The research team worked hard to try and translate across language, culture, and scientific systems, terminologies and meanings.

However, there remain areas of misunderstanding. For example, we needed to design an informed consent procedure for all of the Tibetan women who would be taking part in the study.[3] We had to describe the risks and benefits of participation, and also about how the research would be done and what exactly would be measured. We also had to introduce patients to the Tibetan and Western medicines that would be given to them. But these descriptions of the Tibetan medicine did not follow Tibetan medical theory. The understanding of how the medicine in question worked was simplified to say that it has been used to 'reduce blood loss after delivery'. At a superficial level, this is not untrue. Traditionally the medicine has been given to Tibetan women during childbirth for many reasons, one of which relates to excessive bleeding.

Yet if we really look carefully at this statement, there are some inaccuracies. Tibetan medicine cures the disease by balancing the various elements (earth, air, water, fire) and the *nyépa* in an individual. Tibetan medicine does not suddenly try to reduce something or raise something. Rather, 'health' and cures for specific problems emerge from the dynamic force of the elements and *nyépa* in interaction, and by rebalancing against the pathological forces that regulate things like blood flow; Tibetan medicines can even have an effect on the triggers that cause haemorrhage in labour. Sometimes the results of treatment can be discerned immediately,

sometimes in the long-term; at other times, the results of treatment occur in different forms. The Tibetan medical practitioner measures these changes by monitoring the process of treatment through pulse diagnosis, urine examinations, and other various measurements. For instance, there are single *lung* diseases (*lungné kyagänpa*) and a mixture of wind diseases (*lungné dändü*). If the affliction is simply a single element imbalance, the pulse reveals an 'empty' quality when the practitioner presses a bit deeper. If the treatment progresses well, the 'empty' feeling will be replaced by a more substantial pulse. These types of what I am calling 'qualitative' measurements were not accounted for in the study.

Nevertheless, our research team made detailed notes about the whole process of designing the study. For instance, before the formal clinical research started, we undertook a great deal of other qualitative research about local people's use of Tibetan medicine, including its historical background and how the medicine had been produced. We researched its function according to Tibetan medical theory. We also did numerous qualitative surveys to find out some other relative questions about Tibetan women's experiences of childbirth, from social, cultural and economic perspectives (see Adams et al. 2005a, and Adams et al. 2005b). The biggest challenges were those research methods that involved differences in qualitative and quantitative research approaches. At the most general level, this problem begins with the basic conceptualization of a 'research problem' and subsequent methodologies employed to address this problem.

While such research efforts are exciting in one sense, they can also cause a variety of practical difficulties, as well as a certain loss of confidence in Tibetan medicine, depending on the results of the clinical trials. And, as discussed above, at a time when the rules and regulations of society are changing, when new medicines are being tested and produced, these difficulties influence people's understanding of medicine in general and confusion over efficacy in particular.

An additional complication is that Tibetan medicines are now required to be produced according to new standards of production, manufacturing and distribution – so called 'Good Manufacturing Practices' or GMP, and related regulations. Such changes have had an impact on Tibetan medicine, in that this medical system is now being made to conform to Western scientific methods, ideas and protocols. This means that Tibetan medicine has to modify the methods, which, historically, made it what it has been up to now. Some Western and Tibetan scholars are working on research about the positive and negative aspects of the implementation of these new

policies and practices on the quality, safety and efficacy of Tibetan medicines (see, for example, the work of Sienna Craig in the U.S. and Dr Akong Rinpoche and Dr Jigmed Phuntsok).

In sum, I argue that we must take into account the whole process of change in Tibetan medicine, including the changes in the administration within the present social system. In this way, an appropriate method of administration, which preserves and is commensurate with the unique knowledge of Tibetan medicine, and yet also well versed in the vocabulary of Western medical science, would be created. Meanwhile, people who are involved in working with the subject should become more aware of the changing social system and learn to adapt to this more modern way of thinking, through incorporating qualitative as well as the quantitative aspects of research in the way that I have outlined here. I believe this would lead to a period of increased growth in Tibetan medical knowledge and deepened clinical practice.

Notes towards a New Paradigm for Tibetan Medical Research

Zurkhar Lodrö Gyelpo (1509–1579), a famous Tibetan doctor of the sixteenth century and main representative of one of the two great medical schools in Tibet, the Zurlug, points out four steps in the elaboration of Tibetan medicines in his *Commentary on the Four Tantras – Oral Instruction of the Ancestor* (*Rgyud bzhi'i 'grel pa mes po'i zhal lung* or short *Mes po'i zhal lung*): to identify the medicinal ingredients to be used; to diagnose the disease to which the medicine should be applied; to discover how to use medicines through the practice of formulating a remedy by combining the ingredients; and finally to make sure that the proper formulation ensures the quality of the remedy.

His contributions are a useful starting point for thinking about how to create a new paradigm for Tibetan medical research. These historical suggestions have contemporary salience, particularly in relation to Tibetan medicinal plants and pharmacology. One issue that recurs when Tibetan medicine comes into conversation with Western sciences such as botany is the question of the classification and identification of medicinal ingredients. There have been conflicts over the identification of ingredients for a long time, throughout Tibetan regions.[4] Because of the diversity of habitats of medicinal plants, minerals and animals, and many other reasons, there is a

lot of variety in the Tibetan nomenklatura. This creates a problem in that several medicinal plants have no common identity, causing confusion in the use of those ingredients in certain prescriptions. For this reason, it would also be good to hold specific conferences and conduct more research on plant identification, in order to discuss these points of knowledge diversity, to connect them with textual sources, and to provide opportunities for today's Tibetan medical practitioners to think about how such ingredients should be classified and described for both clinical use and research, and how such concepts as potency are understood in qualitative and quantitative terms.

In addition, we can think about this new paradigm in terms of physiology. The profound elemental theory of Tibetan medicine applies at the level of tissues and cells in the body. How does each element function in itself and as part of a whole biophysical system? A systematic qualitative and quantitative comparison of the classification systems of disorders and medicinal ingredients in Tibetan medical theory and in biomedicine would be very useful, and could lead to much-needed research into the points of continuity and distinction in terminology used in the two systems, and larger issues of epistemology. This would allow researchers to work towards a standardization of the concepts in the two traditions, stating the differences and similarities of the two ways of knowing. For some chronic diseases it might be necessary to conduct special clinical trials that would utilize both qualitative and quantitative research approaches based on Tibetan medicinal knowledge, along with the verification of the chemical composition of substances through laboratory testing, using statistical methods to analyse the data.

In this chapter I have attempted to discuss not only the research methods used within the system of Tibetan medicine itself, but also at a theoretical level how Tibetan medical research could be carried out using modern methods under the very strict laws of today's Western-style medical paradigms, but without sacrificing Tibetan medical theory in the process. Like many of the other contributors to this book, I would also like to open up a discussion of the challenges such an integrative approach would entail, as well as the benefits it could bring. We need to embark on such a project with a commitment to look closely from all points of view, with great care and solid research questions and methods based on the knowledge of both systems.

Notes

1. According to Tibetan medical historiography the first international congress of doctors in Tibet took place in the seventh century and doctors from Greece, Persia and China exchanged ideas with their Tibetan counterparts.
2. The formal gathering and writing up of knowledge only started in the eighth century with the initial version of the reference book known as *Gyüshi* (*Four Tantras*) which was given its definitive form in the twelfth century. It has remained the theoretical basis of Tibetan medicine to this day.
3. This informed consent process has been detailed in Adams et al. 2005b and 2007.
4. See Boesi 2005/06 and Boesi and Cardi 2005 for more information on this topic.

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Chapter 11

The *Four Tantras* and the Global Market: Changing Epistemologies of *Drä* (*'bras*) versus Cancer

Olaf Czaja

Discussing Cancer in Tibetan Medical Terms

In March 1996, a medical conference took place in Dharamsala bringing together doctors and researchers of Tibetan medicine from the Tibetan exile community in order to discuss this medical system in the age of globalization. The 'Conference on Clinical Research in Tibetan Medicine' (*Bod sman nad bcos nyams zhib kyi tshogs chen*) took place on the initiative of the Fourteenth Dalai Lama and was organized by the Research and Development Department of the Men-Tsee-Khang (MTK). Doctors from all over India assembled in Dharamsala. Most of them were trained in Tibetan medicine, some of them in biomedicine and a few in both. Even though participants' biographical information is not listed as part of the proceedings, one can deduct on the basis of the published papers and the panel discussion that nearly all personal physicians of the Dalai Lama, the MTK administrative and medical stuff and several doctors from branch clinics were present at this occasion.

The main objective of this conference was to have a discussion about the two diseases: *cinnyi* and *drä*. The Tibetan concepts of these diseases were compared to and identified respectively as the biomedical disease concepts of diabetes mellitus (*cinnyi*) and tumours – the latter in the sense of 'cancer' (*drä*). The main focus was the particular question of whether or not Tibetan medicine is able to offer a successful treatment for both diseases, particularly in comparison to biomedicine. Different opinions about whether and how

drä coincides with cancer were voiced by drawing upon the standard Tibetan medical texts – the *Gyüshi* and its *Supplement* (*Lhan thabs*), and the commentary to the *Gyüshi* written by Sangyä Gyatso, the *Blue Beryl* (*Vaidurya sngon po*) – as well as upon biomedical knowledge of cancer.

In the West, this conference (and its proceedings) remained virtually unnoticed until today, undoubtedly because the proceedings were never translated into English. However, the event represents a milestone for Tibetan medicine, laying out the future research activities for the MTK in Dharamsala. Vivid and sometimes controversial discussions were presented in the form of panels, lectures and papers, all recorded verbatim, and published as proceedings the following year. These proceedings represent a unique document and a precious insight into the internal discourse on Tibetan medicine and biomedicine from the perspectives of Tibetan researchers, practitioners and administration employees with a traditional and/or biomedical background. Based on the proceedings, this chapter will discuss the different points of views and the outcome of this conference with regard to the complicated relationship between Tibetan and Western medicine.

Tibetan doctors' points of views on biomedical treatments for cancer will be introduced in order to understand the starting point from which a possible Tibetan equivalent for healing this disease was developed. This is followed by an outline of the aetiology and the symptoms of the disease(s) called *drä* which is the Tibetan candidate in this search for identity. A brief discussion of the two Tibetan medical concepts of *nyen* and *sin* will be given, as both concepts are neatly interwoven with *drä* and the Tibetan understanding of this disorder. On the whole, the identification of *drä* with cancer remained controversial, even if all agreed that research should be continued. To this end, participants offered comparison of causes and symptoms and touched upon the important question of Tibetan and Western diagnostic techniques. This also included terminological considerations, research methodology and, most importantly, the religious foundation of Tibetan medicine.

Tibetan Doctors' Views of Biomedicine

One of the motivations for this conference was to discuss whether or not Tibetan medicine might offer effective treatments for cancer. Initially, Tibetan doctors acknowledged the immense worldwide importance of finding effective treatments for cancer. They repeatedly expressed their hope that Tibetan medicine could make a significant contribution here.

They discussed biomedical approaches, such as chemotherapy and radiotherapy, two treatments that were singled out as the most important biomedical treatment against cancer. However, neither surgery nor multimodality therapy (combinations of surgery, chemotherapy and radiation therapy) were discussed at length. Cancer immunotherapy (also called biological therapy, biological response modifier therapy, or biotherapy) remained unmentioned.

The deleterious side effects of chemotherapy and radiotherapy, such as hair falling out and burnt skin, were discussed.[1] Some noted that the 'power of the blood' (*tragi nüpa*) is consequently wasted and 'many poisonous substances enter the blood' with these treatments. Reading the conference papers, one might gain the impression that effective biomedical therapies are nonexistent, that biomedicine had never cured a cancer patient at all and that the treatments are only deleterious.[2] Portraying biomedical interventions in this way enabled Tibetan doctors to suggest that Tibetan medicine might be able to offer an effective treatment against cancer by using herbal medicine (*men*), and that it would be useful to do research by testing such Tibetan medicaments. This possibility would also improve the situation found in many clinics where there is a paucity of patients with newly diagnosed cancer. Most patients with this diagnosis only seek Tibetan medicine after having tried biomedical treatments and medications provided by other medical traditions (Men-Tsee-Khang 1998: 249).

Making Sense of Cancer by (Re-)Interpreting the *Gyüshi* and the *Supplement*

The first part of the conference was devoted to the question of whether *cinnyi* is identical with diabetes (cf., Gerke, in this volume). In this case the discussion was less controversial because in Tibetan medicine only a single matching candidate, namely *cinnyi*, exists. The case of *drä*, however, was different, because there are two candidates: 'wound *drä*' (*madrä*) and '*nyendrä*', as discussed in more detail below. Conference participants mostly concentrated their efforts on *drä*, even if there were and are diverging views among Tibetan doctors on whether *drä* is identical with 'cancer' or not. The complex and contested Tibetan understandings of particular forms of *drä* are best explained by discussing passages from the authoritative Tibetan medical texts of the *Gyüshi,* the *Blue Beryl* and the *Supplement* which form the basis of Tibetan medicine and were used extensively as authoritative sources at the conference.[3]

One of the discussion points concerned the difference between *drä* and *tren* ('swellings', another category of disease). Thus, some doctors of Tibetan medicine, in particular Yeshi Donden (also spelled Dhonden, cf., bibliography) who is most prominently known in the West, expressed the opinion that the Tibetan disease called *tren* corresponds best to the biomedical term 'tumour' and, in a wider sense, also to cancer.[4] While this view was shared by several doctors, I feel it is highly problematic because *tren* basically just means 'swelling', and includes diseases and symptoms which more accurately could be defined as 'cysts', 'concretions' or 'clots'. Still, a different opinion altogether was voiced by Amchi Migmar, who held the view that cancer corresponds to the disease called *yama* (Men-Tsee-Khang 1998: 253f).[5]

While such discussions concerned the possible matching of cancer in Tibetan medicine to diseases other than *drä*, the internal discussion among doctors contained two potential specifications: the 'wound *drä*' and the '*nyendrä*', as they can be briefly called. The disease 'wound *drä*' is described by Yutog Yönten Gönpo in the *Gyüshi* when dealing with co-emerging wounds in the third Tantra, known as the *Instructional Tantra* (*Man ngag rgyud*). In contrast '*nyendrä*' is mentioned in the *Supplement* composed by Sangyä Gyatso as an addendum to the third Tantra of the *Gyüshi* (cf., Appendices A and B). According to the *Gyüshi* the causes are diminishing bodily strength, disturbance of the *nyépa* and the increase of 'impure blood' (*ngentrag*), because food has not ripened by digestive heat. This 'impure blood' is consolidated by the *nyépa* called *lung* (wind) and becomes solid. There are different categories of this disease depending on locality (outside or inside the body) and the organ involved.

The *Supplement* follows this description with some notable additions. *Drä* is classified as a *nyen* disease and shows some modifications such as more pronounced secondary causes, including bad influences of certain demons. 'Impure blood' is put together by the 'wind' along with 'yellow fluid' (*chuser*) among other things. This type of *drä* is associated with the presence of tiny beings called *sin* or *sinbu* which are thought to live in every human body.

The symptoms in both classifications of *madrä* and *nyendrä* are very similar. There exist two types of *drä* – inner and outer *drä*. The general symptoms for outer *drä* of the muscles, bones and 'channels' (*tsa*) are a thin and quivering pulse, hard swelling and little pain; it is considered incurable by herbal baths or fomentation, *drä*-subduing measures and so on. The general symptoms for the inner *drä*, mainly affecting organs, are said to be

like 'swellings' (*tren*). They are hard or invisible and sunken. The patient desires food but vomits immediately after taking it. After inner *drä* are ripe, pus will break out.

These symptoms are agreed upon as basic starting points for discussing the identity of *drä* as tumours and cancer. Improper behaviour and disturbed digestion or metabolism result in 'impure blood', and this is seen as the main cause for *drä* and so was discussed at some length at this conference. These causal explanations were correlated with biomedical explanations. What proved more difficult in cross-medical identification efforts were the specific Tibetan ideas concerning *nyen* and *sinbu* as given in the *Supplement*. They are an integral part of *nyendrä* disease. If one speaks about *nyendrä*, one therefore has to discuss both concepts as well.

The concept of *nyen* that forms the background for the *nyendrä* disease reflects eschatological beliefs, partly of Buddhist influence and of indigenous Tibetan origin, that circulated, and still do so, in Buddhist circles. They show the decline and collapse of political and social order throughout time. In medical writings this is seen as the cause of diseases such as contagious fever (*rimtsé*) and *nyen* diseases (*nyenné*).[6] In the *Supplement* it says of contagious fever:[7]

> When the final five hundred years have come,[8] by the power of passion, men will do perverted actions. Those who employ *mantra* will spread the pollution of killing each other among the followers of the Vajrayāna.[9] Monks engage in sectarian strife.[10] Non-Buddhist,[11] Buddhist monks and Bon monks fling magical weapons.[12] Ordinary men break their vows, pollute the fireside and slaughter animals. At that time the *mamo*-spirits and the 'sky-farers' will all fight each other; the breath of disease will emerge in clouds.[13] From this the 'Nepalese disease', the disease of sharp pain in the stomach, the *gaglhog* disease, 'smallpox' and so on will appear.[14] Moreover, because of the elements of the four seasons, which are less than appropriate, more or the opposite,[15] hard physical activities, the odour of the disease, the poison of elemental demons, having been angry and therefore becoming frightened and being later suffering and longing for something[16] and unwholesome diet it will become a contagious fever.

Similar information is given in the thirtieth chapter of the *Supplement* dealing with *nyen* diseases, of which there are eighteen types. There, it is stated:

> The primary cause is the fierce disease causing demons (*dön*) such as the eight classes of gods and demons, and so on, that grow forth from the three poisons. The secondary cause is that uncivilized and degenerate people do not keep their discipline, break their

> vows and commit the pollution of killing relatives. With their immorality and foolish talk they behave contemptuously to all gods and water-spirits. Holy pledges are not kept and even orders of *lama* are disobeyed. With various bad deeds which are unfitting and non-virtuous they bring the minds of the protecting deities into rage. Even the gods fall down to the demons (*dü*). The poisonous breath of the *mamo*-demons overcasts (the sky) as clouds. The wild *nyen* (*nyengö*) (and) the contagious disease (*rimné*) will fall like rain. Moving as dry tinder would meet fire, because of this, the *sin* called *tre tre ho* alias *parpata* takes the miraculously transformed body of a *sin*, the head and a big mouth of a lizard, a long tail like a snake and many limbs like a centipede (*dala*). Having wings of wind, it moves in all directions. From the air it enters the small hairs of the body and the nasal openings. Accordingly, the *sinbu* staying within the body that are 'blood-*sin*' (*trasin*), without feet, round and red live within the body and move everywhere within the 'channels' (*tsa*). Seven types of poisonous *sinbu* are said to be the primary cause of all *nyen* diseases and cause 'leprosy' (*dzené*), and they are red like copper and thin and not visible. In one moment they can pervade the entire body from head to feet. The secondary causes 'wind', 'bile', 'phlegm' and its combination will increase them. By the secondary causes of place, season, diet, behaviour and disease causing demons (*dön*) the *sin* get disturbed and consume the bodily strength. Because of that a *nyen* disease appears.[17]

The concepts discussed above, and aetiologies of contagious fever (*rimtsé*) and *nyen* diseases (*nyenné*), as expounded in the *Gyüshi* and the *Supplement*, were always regarded as interlinked in Tibetan medicine. Today, these aetiological stories serve multiple purposes and are regarded as prophetic.[18] They are mainly used by Tibetan doctors in exile and in the TAR to show that their medical system is congruent with Western biomedicine and with modern times.[19] For example, the view is frequently espoused that HIV/AIDS is prophesized in these sources and adequately described. For example, Dr Trogawa Rinpoche said in an interview: 'Tibetan physicians speak of AIDS as a *nyen* disease, which is very hard to diagnose. But there is no doubt that the disease is impure blood and can be compared to leprosy.'[20] The description of social and moral decline as a cause for disease found in these Tibetan texts is seen by many Tibetan doctors – at least the senior and more 'traditionally' or 'religiously' oriented ones from exile and from China – as perfectly applicable to contemporary times. They are taken out of the Tibetan context in order to paint a gloomy picture of the present that is seen as being identical with the final five hundred years predicted in Tibet's past. For instance, Yeshi Dhonden writes:

> This last period of five hundred years, began, I believe, in the eighteenth century, and it is an era in which it is prophesied that vices and material affluence will

> increase, while virtue will decline. This is a period in which promises, oaths, and vows will be broken in personal, governmental, and business affairs. False views will proliferate. People will reject or ignore the truth of the continuity of consciousness from one life to the next, while assuming that death entails total, personal annihilation. People will reject the possibility of effective practices that result in spiritual maturation. Moreover, people of religious faiths, including Buddhism, will give only lip service to their objects of refuge. Even monks and nuns will hold false views, fail to keep their precepts, and take monastic vows only as a means to gain a livelihood and acquire social status, reputation, respect from others, and so forth. This is an era in which so-called religious people will not actually practice their religions, but rather treat as merchandise, to be sold at profit.
>
> Engaging in the esoteric practices of Vajrayāna Buddhism can lead to swift spiritual realization, at which point one is qualified to give Tantric initiations, oral transmissions, and teachings. However, people in this degenerate era who engage in such practice, but without carrying through to the point of gaining genuine insight, will still take on the role of being *lama* and give initiations, even though they are totally unqualified. In this phase of human history, many kings, presidents, prime ministers, and other government officials, as well as the populace as a whole, will lack integrity. Judges and peace officers will turn to bribes, so that governments will be run simply by those who have the most money.[21]

The effort to make traditional Tibetan conceptions of disease, aetiology and pathology relevant to a Western audience meant making it clear how most Tibetan notions could be 'translated' in order to seem relevant and even 'equivalent' to biomedical conceptualizations. For example, physicians explained the relevance of the 'poisonous breath of the *mamo* demons' (*mamö khalang*) or, as it is also seen, the breath of disease (*négyi khalang*) of fighting *mamo*-spirits and the 'sky-farers' (*khandromas*) which assemble as big clouds. The concept of the 'breath of *mamo*-demons' is interpreted here as being related to the use of synthetic substances and the pollution of food and environment.[22] For instance, Dr Yeshi Dhonden thinks that

> extremists (those who do not embrace any type of spiritual world view or practice, but rather promote materialism and nihilism) will introduce various types of toxic substances into the environment. I surmise that these include the air-borne pollutants created by atomic and hydrogen weapons, pesticides, and all types of poisons and contaminants that have been produced by modern industry. According to the Buddhist worldview, various types of non-human beings inhabit the sky, and when these poisons become airborne, they poison these beings, making them ill, and the diseases that they experience return into the atmosphere. In this way, unprecedented types of minute organisms are produced

> in the atmosphere, and they then fall to earth, and these are the immediate causes of these eighteen types of diseases. Thus, these new diseases arise due to a confluence of two influences: the general, moral degeneration of modern society and the production of toxins that enter the atmosphere, which produces new types of harmful organisms that return to earth and spread disease.[23]

Based on the references above, it becomes obvious that the concept of *nyen* is employed to explain a lot. It rarely occurs to those who adopt this tactic that perhaps diseases could exist that are not described in the ancient texts of Tibetan medicine. Responses given by many doctors at the conference suggest that this is felt as unacceptable and even the slightest apparent analogy with the present situation is used to be on a par with biomedicine. Surprisingly, they made more of the 'prophetic' qualities of information in the texts than of the fact that Tibetan medicine historically approached these problems from an almost clinical perspective that used medicines and interventions to limit the spread of epidemic diseases like those caused by *nyen* demons. The extremely liberal interpretation offered by Tibetan doctors was not peculiar to senior Tibetan doctors trained in Tibetan medicine with no or restricted knowledge of biomedicine; it could also be heard from some junior doctors at the conference.[24] One might also note that the explanation given by those Tibetan doctors remains very vague and that the eighteen *nyen* diseases, their causes, symptoms and treatments are never given in English translation. As the concepts are very different and difficult to translate, this could explain why the question of the differences between these eighteen *nyen* diseases was not offered. Therefore, a Western audience is always left to trust the Tibetan medical doctors' interpretation and are prevented from making up their own mind. However, as will be shown further below in their discussions during the conference, in the case of cancer Tibetan doctors hotly debated and thus were less self-assured about the identification of this 'modern' disease with their own traditional categories and aetiologies.

As mentioned above, the concept of *sinbu* living in the human body was taken up in the framework of discussing *drä* or 'cancer'. When disturbed, *sin* can cause diseases.[25] Naturally, it is tempting to employ the concept of 'tiny beings' when trying to relate to Western ideas of bacteria or viruses and infections caused by them. Consequently, *sinbu* are often translated as 'micro-organisms' (Yeshi Dhonden 2000b: 144ff). Amchi Dorje Rabten, however, reminded the conference participants of some problematic issues concerning *drä* and cancer by putting forward two questions (Men-Tsee-

Khang 1998: 164). Firstly, 'if one assumes *drä* to be identical with cancer, then are "disease [causing] worms" (*némbu*)[26] able to cause cancer or not?' The answer he received was insufficient. He was reminded that Tibetan medicine is two thousand years old and that one cannot judge the complete facts of future things by means of modern science. Once more it was emphasized that surgery does not work in curing *drä* while Tibetan herbal medicaments (*men*) can. However, Dorje Rabten continued to inquire about the origins of *drä* and asked whether the *sin* of the *nyendrä* disease would come from outside or were innately born within the body. Again, the response was a series of well-known excerpts from the *Gyüshi* and the *Supplement*, as introduced in this chapter and its appendices here, that did not answer his particular question at all, leaving one with the impression that no answer was known for this kind of question.

The concept of *sinbu* and its relation to the *nyendrä* disease was of great importance in the attempt to identify *drä* as cancer. Following the inquiry made by Dorje Rabten, the personal physician of the Dalai Lama, Tendzin Choedrak, expressed the view that *sinbu* are in this case similar to disease causing demons (*döndré*) known in Tibetan medicine but undetectable by Western medicine (Men-Tsee-Khang 1998: 235).[27]

Drä and Cancer

During the conference the question of whether it is the one kind of *drä* or the other was not settled. While the first part of the conference discussion on *cinnyi* in relation to diabetes mellitus showed either clear dissent or support for the idea that the two were 'identical', it was different in the case of *drä* and cancer. In discussions of cancer and *drä* no thorough comparisons between both diseases were made, and each symptom and classification were explored equally and systematically. Most of the discussion centred on how *drä* is described in Tibetan medicine, what cancer is according to Western medicine, and the exchange of experience regarding individual clinical cases treated by Tibetan doctors. There seemed to be no common ground for actual comparison and contrasting of the descriptions. Participants seemed to be in a position of offering initial scholarship on the topic, rather than in a place of evolved understanding.

Reading the transcript, it seems as if a mood of helplessness prevailed at the conference, especially among those doctors trained solely in Tibetan medicine. It was clear in their discussions that they were really not familiar with the biomedical concept of cancer and its varieties. Those Tibetan

doctors trained in biomedicine abstained from giving a definite statement about the identity of *drä* and cancer, as if to suggest that they could not rule out that a *drä* disease could be in some cases cancer. At the same time, their reports suggest that the description of *drä* given in Tibetan medicine did not entirely correspond to their understanding of the biomedical counterpart of cancer. The majority of opinions among the participants remained varied and an open discussion of whether or not a certain argument was regarded as valid or legitimate seldom ensued. Moreover, arguments themselves varied widely, with each doctor giving her or his own specific view. There was no agreement on which kind of *drä* was more likely to be 'cancer'. In the end, however, most of the participants shared the view that *drä* is an acceptable translation for cancer primarily because it was unimaginable that Tibetan medicine's wide body of medical knowledge would not also cover this kind of disease. It was seen as a sort of 'provisional' holding place for Tibetan medicine to acquire relevance in the world of biomedicine. This was interlinked with the view that the aetiological concepts presented in the *Gyüshi* and the *Supplement* would at least predict cancer as a degenerative disease of a degenerated age, one that is closely connected with a declining morality among mankind, and would somehow correspond to a modernity characterized, as those doctors saw it, by environmental pollution and chemical and radioactive substances.

The effort to make Tibetan medical conceptualizations relevant to discussions of 'cancer' took a variety of forms. Pema Dorje and others, for instance, expressed that the 'swellings' (*tren*) symptomatic of *drä* are suitable indicators of cancer (Men-Tsee-Khang 1998: 242). Another point of argument with respect to identifying *drä* with cancer was made in regard to the mode in which *drä* emerges. For example, Amchi Sönam Lhamo suggested that cancer is identical with the *drä* as formulated in the wound section of the *Gyüshi* (*madrä*) (Men-Tsee-Khang 1998: 224ff). She noted that *drä* ripen naturally like a fruit (*drä*) and later, wounds appear. Therefore *drä* is like 'cancer worms' (*cancergyibu*)[28] that form naturally. Similarly, Chökyi stressed that this kind of *drä* assumes a shape formed by itself without being caused by harmful exterior conditions such as arrows, stone, knives, spears and so on. Depending on where the body is affected, lump-like nodes (*gongbu dogchen*) grow gradually (Men-Tsee-Khang 1998: 209).

In contrast to this, Amchi Lobzang Tenpa advocated the view that cancer is *nyendrä*, which he supports with three main arguments (Men-Tsee-Khang 1998: 259ff). Firstly, he refers to the *Gyüshi* that gives a description of the final five hundred years which ends with a warning about 'mixtures of

materials' (*dzäjo*) prepared by wicked non-Buddhist.[29] This is, according to him, the reason that the cancer rate is high among those using 'chemical products' (*dzäjo*) and those staying in places where they are used. Secondly, the term *drä* is applied because it is like the 'fruit' (*drä*) of a plant (*tsishing*) with regard to shape, its growth, and so on. It is like a fruit that has seeds from which a plant grows. Even though one has destroyed it, it grows again. It also ripens like a fruit (*shindrä*). Its mode of growth is like that of cancer. Third, for the 'wound *drä*' (*madrä*) disease, the *Gyüshi* recommends herbal baths or fomentation (*lum*) and moxibustion or cauterization (*métsa*). From this recommendation, Amchi Lobzang Tenpa deduced that cancer cannot be 'wound *drä*' (*madrä*) but must be *nyendrä*, because these techniques are contraindicated for cancer according to biomedical understanding.

At one point in the conference, suggestions were made regarding the possible need to reclassify and re-name the Tibetan diseases so that they made more sense when translated into biomedical terms and concepts. One suggestion was made to unite both *madrä* and *nyendrä*, into a new *drä* group. Others expressed the opinion that there was no need to assume that all new diseases could be explained by Tibetan medicine (Men-Tsee-Khang 1998: 272) and that it should also be open to include new diseases and not necessarily have to always search for similarity or equivalents. In this regard Amchi Sönam Wangdü highlighted that both cancer and AIDS are new biomedical concepts that did not exist about fifty years ago. Consequently, he argued, one has to augment and supplement Tibetan medicine in accordance with Tibetan traditions (*zhung*), referring in this context to the fact that the *Supplement* is itself a supplement to the third *tantra* of the *Gyüshi*. Indeed, this is a noteworthy point made by Sönam Wangdü, who advocated a very subtle approach during this conference, eloquently elaborating his thoughts about this matter. I turn to his work below.

Dilemmas and Opportunities in the Encounter between Tibetan Medicine and Biomedicine

The main points of Sönam Wangdü's presentation are analytically well founded, reflecting the dilemma of the encounter between Tibetan and Western medicine (Men-Tsee-Khang 1998: 213ff). First, he stressed that in the process of identifying the 'same' disease in Tibetan medicine and biomedicine, one has to undertake a thorough comparison of the symptoms of *drä* and cancer. Moreover, one should be aware that cancer includes

'metastatic cells' and 'carcinoma cells' (his terminology). If Tibetan doctors claim that *drä* is cancer and if they say that they can cure it, this poses a very big risk to all Tibetan doctors. Western doctors will examine the results and if the cancer is not completely healed and removed and if just a single metastatic cell remains, it will not be regarded as cured and it will hurt the reputation of all Tibetan doctors. Because of this, researchers have to be completely and definitely sure about the identity of *drä* and cancer, before one makes claims about this. In this regard, one should also pay attention to the fact that since the 'modern' concept of cancer is only about fifty years old, it might sound rather exaggerated if Tibetan medical doctors claim that they have recognized and diagnosed it for more than 2000 years.

From another perspective, there are further difficulties. According to the Tibetan medical tradition of the *Gyüshi,* the *sin* or *bu* that are associated with this disease are not killed by Tibetan medicaments but only slowed down or halted in their actions. In biomedical terms, however, it is expected that a fully recovered patient is cured once all the cancerous cells have been fully eliminated. This is checked by means of biopsy, Sönam Wangdü explained. The cells will be examined accordingly and only then can one possibly speak of having cured cancer. Furthermore, Sönam Wangdü noted that he cannot diagnose cancer by pulse or urine diagnosis. The signs thus taken are simply not clear enough. Again, he warned of the great difficulties this might cause. If Tibetan doctors say that a patient has cancer or has been cured of cancer, this will be tested by biopsy. Everyone should therefore be very careful to avoid harming the reputation of Tibetan medicine with wrong diagnoses. Sönam Wangdü emphasized that if Tibetan doctors compete with or challenge 'science' (*tsenrig*), they will never succeed. If they use modes of explanation in contrast to or which violate 'science' they will never be heard. On the other hand, he pointed out that it is not the case that one has to be always and consistently in agreement with 'science'.

In addition to the problem of establishing identity or equivalence between *drä* and cancer, a much discussed issue was terminology and its standardization. In particular, Amchi Namgyel Qusar stressed the importance of these issues (Men-Tsee-Khang 1998: 231). However, there was some initial confusion regarding the meaning of the Tibetan term *drä* since from a Tibetan perspective it is often associated with *karma* (*lä*) (Men-Tsee-Khang 1998: 166). The term *drä* basically means 'fruit' and might possibly allude to the fruit (*dräbu*) of *karma* (*lä*). Discussions focused on the fact that *drä* can occasionally be a disease caused by *karma* (*läné*) – such as other diseases – but that *drä*, in general, is not a specifically *karmic*

one. During the discussion, most of the speakers agreed that it is too early to agree on a final terminology. Some noted that one should not mechanically apply a Western term but that such applications were useful only if based on the reasoning found in one's own tradition. A misconception would cause confusion and could lead to incorrect attempts to cure (Men-Tsee-Khang 1998: 250).

Closely related to this issue of terminology was the question about the research methodology that should be used in order to produce evidence for the efficacy of Tibetan medicaments for diabetes and cancer. This led to the question which of the traditions should be followed. Amchi Tendzin Deje pointed out that the Tibetan medical tradition cannot be separated from *chö* but is closely connected with it. In contrast, according to Western science, medicine and religion have not even the slightest connection and are in fact antagonistic (Men-Tsee-Khang 1998: 202f). An unnamed personal physician of the Dalai Lama commented upon this, emphasizing that one should distinguish between *chö* and superstition (Men-Tsee-Khang 1998: 203f). Practicing religion removes ignorance and educates the mind of man, which, he noted, is impossible without relying on religion. Thus, he reasoned, it will always be connected with religion. This underlines, once more, the uniqueness of Tibetan medicine that is, according to him, now more than two thousand years old. Those speaking of 'science' (*tsenrig*) declared that it would cease to flourish in Tibet. Today their own Tibetan tradition, he added, is often explained from the Western point of view. It is, however, important to realize that Tibetan traditional knowledge is deep and 'profound' (*tingzab*) and 'expansive' (*gyacewa*), and that one cannot fathom it with our level of learning. Because one cannot fathom it, the Western scientific system of today appears to be more clear or comprehensible. Interestingly, he took the words 'profound' and 'expansive' – traditionally used as attributes for Buddhist teachings – and employed them to contrast Tibetan medicine with Western science. He was undoubtedly not alone in feeling the risk of Tibetan medicine being evaluated by a biomedical system that lacks any religion.

Amchi Tendzin Kyidzom's presentation explored the testing and trial methodology applied to Tibetan medicine in more detail (Men-Tsee-Khang 1998: 284ff). He pointed out that many Western scientists criticize religion and traditional systems of knowledge (*rigzhung*), dismissing them as useless and without benefit. In this regard, he referred to Greek medicine. Even though it had existed for many generations and was helpful, it became subject to the criticism that if one could not see its actions or concepts with one's eyes,

then the reality of these would be questioned. Eventually this ancient Greek medical tradition vanished without a trace in Western countries. Luckily, in Asia, the ancient and traditional habits and traditions are maintained, and religion and traditional systems of knowledge (*rigzhung*) remain unspoiled.

At the same time, he noted that in general Tibetan medicine is in harmony with scientific methodology and thus one should use it for tests and clinical trials. However, this should be done in accordance with Tibetan medical specifications. For example, research should use the particular modes that Tibetan medicine has for classifying diseases according to primary and secondary causes, categories, symptoms and treatment. It should also include the particular diagnostic techniques of examining the pulse, touch and urine. He saw a basic difference between the Western and Tibetan attitudes to research. Western scientists examine only the disease and carry out their research accordingly, but Tibetan medicine mainly focuses on the patient and the treatment, making the process idiosyncratic and flexible, depending on how the patient is feeling. In conclusion, he recommended that research should focus on both the patient and the disease. He also stressed that the application and choice of medicines differs.

Another significant difference, he stressed, lies in the application of medicines. In Western clinical trials, a single medicine is given to all patients who have a specific shared disease. In Tibetan medicine, treatments vary for different patients with the same disease, depending on the cooling or warming properties of a medicine, the hot or cold nature of the disease as diagnosed by pulse and urine, and whether 'wind', 'bile' or 'phlegm' is predominant. Based on this, one may or may not administer the same medicines for a specific disease. Thus Amchi Tendzin Kyidzom outlined an interesting methodological approach to test and conduct trials that would incorporate Tibetan criteria, but no consensus was reached during the conference. Nevertheless, in the years following the conference, several trials were conducted in Tibetan clinics in India.[30] Another clinical study on ovarian cancer is planned and a proposal was submitted to the All India Institute of Medical Sciences (AIIMS), New Delhi.

Conclusions

One might conclude from these proceedings that doctors of Tibetan medicine in exile are engaged in two conversations about the interface between Tibetan and Western medicine. The first conversation is internal among Tibetan doctors themselves and the second is a simplified, external discussion that

focuses on communication with Western interlocutors. The second conversation is characterized by missing discussions on problems or contradictions, and a 'scientization' (or standardization) of Tibetan medicine. It might even be regarded as a new form of Tibetan medicine – disseminated via English-language publications and interviews – that is designed to challenge Western biomedicine by presenting it as an alternative to both Western medicine and Ayurveda.[31] This results in the situation where even though both Tibetan medicine and Ayurveda share a common physiological and aetiological base, they favour different diseases that might be identical with cancer. In contrast to Tibetan medicine, Ayurveda mainly considers *arbuda* as an equivalent of cancer (cf., for recent studies, Devaraj 1999, Shastri 2001, Singh 2002 and Balachandran and Govindarajan 2005).[32] The validity of this identification of *drä* with cancer is indeed questionable.[33]

Today claims are made that Tibetan medicine can cure cancer (and diabetes); many interviews and publications by Tibetan doctors express this view.[34] However, in their external conversation, that is with Western participants, they are completely silent not only on the painful process they had to go through in order to make this claim, with its questionable veracity, but also on the fact that Tibetan medicine has never had a method of diagnosing these 'Western' diseases which they have 'allegedly' successfully treated for two thousand years. Internally, the sketchy qualities of the 'external' claims become more visible. In the external conversation, in as far as publication on Tibetan medicine and interviews for print and online media are concerned, doctors omit to mention that they cannot diagnose cancer by pulse and urine diagnostic techniques but have to rely on the diagnosis made by biomedical doctors. Even then, some techniques used by biomedicine, such as biopsy, are treated by those Tibetan doctors with scepticism. Similarly, they are sceptical of Western therapies such as chemotherapy or radiotherapy and certain types of treatment such as surgery, which they see as causing pain with no benefit. In their opinion, the only effective medical treatment is herbal medicaments (*men*) which are an integral part of their own medical tradition, now offered to the world at large. In this regard both diseases discussed at the conference – diabetes and cancer – were consciously chosen by the Men-Tsee-Khang administration, and it seems to me, for reasons that have more to do with the 'global market' than with epistemological rigour. Indeed, the ability to equate cancer with *drä* was not just seen as a good starting point to enter pharmaceutical markets of the West but also as a good way to prove the validity of Tibetan medicine world-wide. As Lobzang Chöphel put it, 'if we apply our

medicine/herbal medicaments (*sman*) and it is of benefit, the Western nations have no choice but to recognize that our tradition (*shunglug*) of *chö* and *sowa rigpa* – i.e., religion and medicine – is extremely profound and beneficial' (Men-Tsee-Khang 1998: 115). It is obvious that both diabetes and cancer were recognized as the most significant diseases of modern times for which an effective cure by means of a herbal treatment would be a breakthrough for Tibetan medicine. They therefore tried diligently to find an equivalent for these diseases in the Tibetan medical system. Having set the agenda for this conference, its outcome was partly administratively predetermined. It was assumed that the comparative identification of cancer and diabetes with two disease categories found in Tibetan medicine would be successful; the possibility that there might be no relation of identity was never seriously taken into consideration by the administrative board. This assumption worked out well for *cinnyi* and diabetes but it partly failed for *drä* identified as cancer.

In general, this conference showed how difficult it is to merely 'translate' between the systems of Tibetan medicine and Western biomedicine. Concepts and opinions developed over centuries are not only medically based, but also contain within them particular cultural and religious orientations. These orientations are deeply influential. If corresponding terms or concepts are taken to be strictly medical or if translation stops after attempts to compare medical features, this translation process might fail or result in more misunderstanding. The dynamic nature of such a 'translation' process also reveals that given concepts change depending on the view one takes. This also applies with regard to biomedicine. Those participating in such discussions will always bring with them their own specific view. Thus, Tibetan doctors held particular opinions on biomedicine that were not necessarily congruent with those of their Western colleagues, nor with those of other Tibetan doctors. At the same time, Tibetan medicine changes by taking new approaches to interpret this medical system. One can be sure that this process will continue and Tibetan medicine will take a stand in a globalized world that will differ from that taken in the past. This conference held in 1996 was an important step in this process.

Appendix A

The *drä* disease according to the *Gyüshi* and the *Blue Beryl*[35]

The primary and secondary causes for *drä* diseases are (1) diminishing bodily strength (*dram*), (2) disturbance (*trug*) of the 'defaults'[36] and (3) the increase of 'impure blood', because food has not ripened by digestive heat. This is wrapped up by 'wind'.[37] There are eighteen kinds of *drä* which can be subdivided according to the place in the body which is affected and the 'default' involved. The former consists of two main categories: inner *drä* and outer *drä*. The outer are the *drä* of muscles, bones and 'channels',[38] whereas the inner concerns the solid and hollow viscerae, namely the lungs, heart, liver, spleen, kidneys, stomach, large intestine, rectum and bladder. Under the category of 'default' are classified 'wind', 'bile', 'phlegm', blood and, additionally, weapons and the so-called little bird's egg-*drä*.

The general symptoms are for the outer *drä* a thin and quivering pulse, hard swellings, little pain and it will not be cured by herbal baths or fomentation (*lum*), *drä*-subduing measures (*drädul*) and so on. In particular, the outer *drä* show some characteristic signs. The *drä* of the muscles resemble a frozen wet turnip or a radish. If it is the *drä* of the bones, the colour of the bones changes and its sap is spoiled and consumed.[39] A burnt juice of nit-like pus will appear within thin 'yellow fluid' (*chuser*).[40] In the case of *drä* of 'channels' (*tsa*), it is swollen on top of the 'channels' and there is a swift and a sharp pain which is quick and radiating. These are difficult to cure, if they are on vulnerable points (*né*).

The inner *drä* are like swellings (*tren*); if touched, they are hard or they are not visible and sunken, one is longing for food.[41] After it is ripe, the pus will burst out both upward and downward. The specific symptoms can be summarized as follows:

- The *drä* of lungs – the throat is ill, one has the sensation that it is round and one has difficulties eating and drinking.
- The *drä* of the heart – one has no clear memory, one's thinking is getting dark.
- The *drä* of the liver – one has difficulties in breathing, one feels dizzy, one is very thirsty.
- The *drä* of the spleen – one has a bloated stomach, one has difficulties in breathing.

- The *drä* of the kidneys – one has difficulties in urinating, one has the sensation to be squeezed, the waist is ill.
- The *drä* of the stomach – one has a bloated stomach, one is longing for food, the throat is ill.[42]
- The *drä* of the large intestine – after indigestion one has hiccups, the face and the back of the foot are moving / agitated, and one has diarrhoea.
- The *drä* of the rectum – the anus hurts, the 'breath' is blocked by flatulence, when defecating it will be mixed with pus.
- The *drä* of the bladder – one has difficulties in urinating, the tip of the urethra hurts.
- The *drä* deriving from 'wind' – one has much pain, one's stomach grumbles and it is not firm, one feels dizzy.
- The *drä* deriving from 'bile' – it is red, hot, heat and pus appear quickly.
- The *drä* deriving from 'phlegm'—it has pale colour and one can not digest food.
- The *drä* deriving from blood – appears in the breast and the uterus, it is very hot, and covered with black pimples (*drum*), pus is issued instead of urine.
- The *drä* of weapons – wound caused by a weapon, having hit against a stone and so on. The swelling will reduce, come back again and remain permanently.
- The little bird *drä* – it is like a little bird's egg, hard, it does not hurt, and it remains firmly.

Appendix B

The *drä* disease according to the *Supplement* by Sangyä Gyatso[43]

The primary cause for this disease is the same as that for the '*nyen* fever'. The secondary causes comprise hard physical activities, angry earth spirits (*sadag*) and water and rock spirits (*lunyen*), increasing 'impure blood' (*ngentrag*), 'yellow fluid' (*chuser*) and tiny insects / worms (*gümbu*/*gumbu*)[44] and so on, which are wrapped up by 'wind'. This is associated with the *sin* living in the body. Because these all desire (*zhenpa*) flesh, bone and 'channels', it is called *drä*.

The *drä* diseases are of two kinds: inner and outer *drä*. The former are the *drä* of flesh, bones and 'channels' (*tsa*) and the latter are the *drä* of the interior of the body such as those of the hollow and solid viscerae.

The symptoms of the outer *drä* are a thin and quivering pulse; the affected part is swollen and if pressed, it is hard. More specifically, the *drä* of the muscles resemble a frozen wet turnip or a radish (*nyungshe khyagpa*).[45] If it is the *drä* of the bones, the colour of the bones changes and its sap is spoiled and consumed. Or it is on top of the bones and resembles a driven-in iron nail. In the case of the *drä* of the 'channel', the 'channel' is swollen and resembles an angry black snake.

The symptoms of the inner *drä* are like 'swellings' (*tren*). If touched, they are hard. They can also be invisible or sunken. It is said that the patient longs for food.[46] After they are ripe, their pus will break out both upwards and downwards.

Notes

1. The view held by the present personal physician of the Fourteenth Dalai Lama, Lobzang Wanggyelchog, is representative of many of the participants. In a discussion he says that he went to the largest cancer clinics in New York and it seemed to him that if they did not have chemotherapy they would have no pain-killing medicine at all. Accordingly, this doctor spoke with practitioners in a French clinic where he learned that they did not have medicines to cure cancer (Men-Tsee-Khang 1998: 189). Such opinions are shared by other senior doctors. They reveal an extremely limited knowledge of biomedicine, mostly based on visits and talks but no study. Common to them is, it appears, a very low esteem for biomedicine. One can find few positive statements about any part of it. Some senior doctors have a very critical view on surgery bringing forth more cases when cancers developed again following surgery (Men-Tsee-Khang 1998: 164, 208 etc.).
2. See also the numerous clinical records given by Tibetan doctors. These have in common that they tell of cancer patients for whom biomedical treatment failed completely but who were cured by Tibetan medicaments (Men-Tsee-Khang 1998: 192ff, 207f, 245ff, etc.).
3. It is also necessary, because no translations of these texts exist. They are the most important textual sources for the training of Tibetan doctors, past and present, and the medical ideas and concepts contained in them constitute the core Tibetan medical thinking. In my opinion, one must consult them in order to understand Tibetan medicine and the view of Tibetan doctors.
4. Yeshi Donden (2000a: 194ff), Yeshi Dhonden (2000b: 144ff). For similar examples in the conference papers and discussions, see also the papers by the physician of the Dalai Lama, Lobzang Wanggyelchog (Men-Tsee-Khang 1998: 160ff) and Yangbum Gyal (Men-Tsee-Khang 1998: 262f).
5. *Yama* belongs to the complex of *sin* diseases. In general, depending on the context, *sin* could be regarded as 'parasites, worms, insects, a spirit' and so on. Thus, *yama*

itself can be a term for a kind of parasite or a region of the body; in modern use both is possible. Tibetans regard it as (a) *sin* place that lies between the eyes and ears, and (b) an appellation for very small *sin* that live in the blood vessels and move through the body. Western authors of Tibetan dictionaries render *yama* as (a) temples and (b) sinus, although it should be added that the usual term for temples is *murgong*. In the *Gyüshi* two kinds of *yama* are distinguished: the white and the black *yama*. These can be characterized by the strength of the illness and if it belongs to a hot or a cold disease. If it is hot and has great strength it is diagnosed as 'black *yama*'. On the contrary, if it is cold and the strength is weak it is called 'white *yama*'. This twofold classification, however, is usually discarded in favour of a threefold one that includes piebald-coloured *yama* as well (*yama trabo*). This can be usually found in clinically orientated Tibetan treatises and in works on compounding medicaments. Migmar, too, is a proponent of this threefold classification. The *yama* disease of Tibetan medicine is usually identified as a type of sinus illness. In any case, Migmar does not give a detailed explanation for the identification of *yama* and cancer.

6. In this Tibetan medicine is naturally not alone. Other traditional medical systems, such as Indian and Chinese medicine, also hold the belief in the socially determined nature of particular diseases, cf., Conrad and Wujastyk 2000.
7. *Rims zhes bya ba'i nad 'byung rgyu rkyen ni / lnga brgya dus kyi tha mar gyur tsa na / mi rnams 'dod pa'i dbang gis log par spyod / sngags pa rnams ni rdo rje'i nang dme dar / dge 'dun btsun pa rnams ni sde 'khrug byed / mu stegs ban bon rnams ni zor kha 'phen / skye bo rnams ni mna' thab shan dmar byed / de dus ma mo mkha' 'gro kun 'khrugs te / nad kyi kha rlangs sprin du chags pa las / bal nad rgyu gzer gag lhog 'brum sogs 'byung / gzhan yang dus bzhi'i 'byung ba dman lhag log / drag shul dri dugs khro 'jigs mya ngan 'dod / kha zas ma snyoms pa yis rims su 'gyur* (*Lhan thabs* 146.3–12). This view is also expressed in the *Gyüshi* when discussing contagious fever (*rimtsé*) and consequently also in the commentarial literature on this medical work, such as the *Blue Beryl, Rgyud bzhi* 243.1–11, *Vaidurya sngon po* 646.11–647.21. For the interpretation given above I followed the explanation given by Sangyä Gyatso in his commentary as this is seen as standard by Tibetan doctors today. For corresponding depictions, see Thangka no.42 of the set commissioned by Sangyä Gyatso (Parfionovitch et al.1992: 99f, 255, no.70–101).
8. This is based on the view that the teachings of Buddha Śākyamuni last for a period of 5000 years. These ten times five hundred years are characterized by certain religious practices and qualities. The first three five-hundred year periods are times of 'fruit/result' (*dräbu*). During this time the Arhats do not go away but stay permanently. The middle three five-hundred-year periods are times of 'realization' (*drub*). This is a time of studying wisdom (Tib. *shérab*, Skt. *prajña*), engaging in meditation and practicing discipline. The following three five-hundred-year periods are those of scriptural teachings (Tib. *lung*, Skt. *āgama*), a time of studying the *Abhidharma* (*mngon pa*), *sutra* (*mdo sde*) and the *Vinaya* (*'dul ba*). In the last

five-hundred-year period, however, one does not possess true insight and upholds follows religion just as a mere sign. This is a time of degeneration and decline. Because, historically speaking, we are close to that period, it is formulated as 'the final five hundred years' in this medical text. As the Tibetan commentators see it, this time signifies the era after nine five-hundred-year periods have elapsed (cf., *A ru phreng* 244.2; *Skyems pa 'grel pa* II 189.4).

9. The corresponding passage literally reads 'the inner pollution of *vajra*' (*dorje nangmé*). The term 'inner pollution' (*nang dme*) denotes the killing or hurting of a relative. The qualification of *vajra* (Skt., Tib. *dorje*) is interpreted as signifying those who have taken tantric Vajrayāna vows. It is not just a 'sectarian disputation' as Parfionovitch et al. 1992 see it (ibid. 99f, 255, no.71) but actual killing during a fight as it is also depicted on the *thangka* by two ordained monks who engage in fighting with swords. In contrast to the view commonly found in the West, warfare and sectarian strife was widespread in Tibet of the past and also included military clashes between monks.
10. Again the interpretation by Parfionovitch et al. 1992 is not accurate (99f, 255, no.73). It is not just 'discord among the monastic communities' but war between monastic communities.
11. In this context the term *tīrthika* (*mutegpa*) refers to a heterodox, non-Buddhist follower of an Indian religion.
12. This hurling of magical weapons (*zorkha*) is part of a Tantric practice for casting a spell or a curse on enemies or demons (*ngönjö*).
13. Both are also seen, in general, as one of the potential causes for common 'fever' (*tsawa*) (*Rgyud bzhi* 178.14).
14. In the commentaries these diseases are linked with clouds of a specific colour, namely yellow/golden clouds cause the 'Nepalese disease' (*béné*) and 'severe cold, flu' (*chamba*), red clouds cause the 'disease of sharp pain in the stomach' (*gyuzer*) and 'diarrhoea' (*shälné*) and black clouds cause the *gaglhog*-disease and 'smallpox' (*drumné*). Those who have less religious virtue will be struck by these diseases, *Vaidurya sngon po* (647.11), *A ru phreng* (245.22), *Skyems pa 'grel pa* (II 190.7).
15. The technical expression of 'less, more and opposite' or 'deficient, excessive and wrongly utilized' (*menlhalo*) is frequently used in medicine. In particular, it describes some conditions that cause a disease (cf., *Rgyud bzhi* 35.12, *Vaidurya sngon po* 167.15, Yeshi Donden 2000a: 57f, Clark 1995: 77f). In this context Sangyä Gyatso attributes it to the elements of the four seasons.
16. This passage literally reads: 'strong[,] smell[,] poison[,] anger[,] fear[,] suffering[,] desire' (*drag shul dri dugs khro 'jigs mya ngan 'dod*). It corresponds to the same formulation given in the *Rgyud bzhi* (243.10). It was taken by Yutog Yönten Gönpo from the *Aṣṭangahṛidayasaṃhitā* of Vāgbhaṭa. As Yutog Yönten Gönpo did not write what is known in Tibetological and Indological scholarship as an 'auto-commentary', its interpretation was not fixed for next generations. The Ayurvedic text simply means more or less literally what is listed as an enumeration for potential

causes of fever (Skt. *jvara*, Tib. *rims*), (Skt. *grahāveśauṣadhi-viṣa-krodha-bhī-śoka-kāma-jaḥ | abhiṣaṅgād graheṇāsminn a-kasmād dhāsa-rodane* || 40 || Tib. *gdon zhugs sman gyi dri dang dug / khros 'jigs mya ngan 'dod las byung / mngon pa zin las byung rims yin* (*Yan lag rang 'grel*, 44–2–2, Das and Emmerick 1998a: 104, Das and Emmerick 1998b, Hilgenberg and Kirfel 1941: 219). The Tibetan doctors, however, followed their own view on the statement of the *Gyüshi* and did not employ the Ayurvedic original for a better understanding. Thus 'odour', which in the original Ayurvedic text stands for the odour of plants (Skt. *osadhi-gandha*, Tib. *sman gyi dri*), is seen by them as denoting the 'odour/smell' (*dri*) of a disease that someone has who is ill over a longer period, (*Vaidurya sngon po* 647.15, *A ru phreng* 246.2., *Skyems pa 'grel pa* II 190.12. Poison (Skt. *viṣa*, Tib. *dug*) is understood as meaning 'the pain of the poison of elemental demons' (*'byung po'i dug gsum kyi gzer*), while in the original Ayurvedic text it is simply poison (cf., *Vaidurya sngon po* 647.15, *A ru phreng* 246.2, *Skyems pa 'grel pa* II 190.13). Similarly, anger (Skt. *krodha*, Tib. *khros*), fear (Skt. *bhī*, Tib. *'jigs*), suffering (*śoka*, *Tib. mya ngan*) and passion/love (*kāma*, *'dod*) are seen by the Tibetan doctors as a unit that they arbitrarily bring under the category of the 'three poisons' (*dug gsum*). In their view one should understand it in the following way: because one develops hate, one has anger and ignorance; being discouraged, one feels fear; and being also separated from close friends and so on, one is mentally distressed and desires something.

17. *De la rgyu ni dug gsum las skyed pa'i / se brgyad la sogs drag po'i gdon yin te / rkyen ni mi bsrun snyigs ma'i mi rnams kyis / khrims la mi gnas mna' za nang dme byed / bag med tho cos lha klu kun la bsdos / dam tshig mi srung bla ma'i bka' yang bcag / ma rung mi dge spyod ngan sna tshogs kyis / srung ma'i thugs khros lha yang bdud du babs / ma mo'i kha rlangs gdug pa srin du 'khrigs / gnyan rgod rims nad char bzhin phab pa las / spra ba rlan med me dang phrad pa bzhin / rgyu la rkyen de tre tre ho zhes sam / parpata de srin gyi gzugs sprul pa / rtsangs pa'i mgo dbyibs kha che sbrul lta bu / mjig ring rta bla ltar du yan lag mang / rlung gshog ldan pas phyogs kun rgyu ba ste / bar snang khams nas ba spu sna sgor (*note: *bdud rtsi ngum pa dang rgyud kyi dgongs pa zung du bsgril ba) 'jug / de bstun lus nang gnas pa'i srin bu ni / khrag srin rkang med zlum la dmar ba de / khrag la gnas shing rtsa nang kun tu rgyu gnyan na kun gyi rgyu dang mdze nad byed / ces pa'i dug can srin bu rnam pa bdun (*note: *gag lhog la) zangs ltar dmar zhing phra la bltar mi mngon / skad cig tsam la mgo rkang khyab rgyu nus / de la rkyen ni rlung mkhris bad kan 'dus / skyed byed yul dus zas spyod gdon rkyen gyis / srin 'khrugs lus zungs bzas pas gnyan nad 'byung* (*Lhan thabs* 176.5–177.5).
18. In particular, the *nyen* diseases are seen as prophesied by Padmasambhava. Various texts and orally transmitted concepts about these diseases have been attributed to this legendary figure. Some of them were taken by Sangyä Gyatso in preparation for his entry in the *Supplement* but they do not represent the only possible classification of this type of disease(s). Such texts were frequently regarded as 'treasures' (*terma*) and at the time of discovery found together with other items

such as religious images and texts with *mantra*. Concerning these 'treasures', this is the explanation made by the doctor and religious specialist Trogawa Rinpoche: 'A very old Tibetan scripture, written in a language that nobody can read or understand off-hand, not only describes diseases that would arise in much later times in great detail and precisely but also taught heedful methods of treatment. In any case, treatment of many new diseases involves medication combined with *mantra* recitation. It is necessary to decipher the ancient script and then prepare the medicine accordingly, while reciting the appropriate *mantra*. A few instructions have been translated and are successfully being applied in the treatment of cancer, presupposing it is not much too late and patients have not undergone chemotherapy. The ancient medical scripture consists of 18 chapters dealing with *nyen* diseases and speaks about four or five in detail; it lists a total of seven diseases that would arise in modern times, the first being cancer, the second being AIDS' (http://www.rinpoche.com/teachings/nyen.htm, accessed on 11 June 2008; http://www.jcrows.com/nyen.html, accessed on 11 June 2008).

19. See for example Yeshi Donden (2000a: 196ff), Yeshi Dhonden (2000b: 128ff).
20. http://www.rinpoche.com/teachings/nyen.htm (accessed on 11 June 2008); http://www.jcrows.com/nyen.html (accessed on 11 June 2008).
21. Yeshi Dhonden (2000b: 128f); cf., Yeshi Donden (2000a: 197). Yeshi Dhonden even gives a beginning date for this final period of five hundred years. If one follows Yeshi Dhonden's opinion, one has to conclude that 'contagious fever' (*rimné*) and *nyen* diseases did not exist prior to the eighteenth century. Furthermore, one can assume that in two hundred years the era of Buddha Śākyamuni will end and the future Buddha Maitreya will re-establish Buddhist religion in the world. Usually the Tibetan commentaries abstain from dating the final five hundred years. If one agrees on a certain date when this period begins, then one must logically accept, according to this prophesy, that prior to this and afterwards no 'contagious fever' will afflict people. Given evidence to the contrary, Tibetan doctors avoid the details of this prophesy today by putting it in vague terms, as did Trogawa Rinpoche: 'Both Lord Buddha and Guru Rinpoche, Padmasambhava, prophesied that *nyen* diseases would arise and increase in future times. They also spoke about the causes of *nyen* diseases, namely that immoral behaviour and unhealthy habits would get worse and worse as time proceeded; ethical behaviour and mutual responsibility and care, on a small and large scale, would decline, and people would treat each other badly' (http://www.rinpoche.com/teachings/nyen.htm, accessed on 11 June 2008; http://www.jcrows.com/nyen.html, accessed on 11 June 2008). Similarly, Tendzin Choedrak also spoke to Westerns of very ancient texts that prophecize eighteen certain diseases in future times (Asshauer 2005: 74; cf. also Tendzin Choedrak 2005: 329f).
22. Besides the text passages cited above, there is another statement given in the *Gyüshi* that is related to them and present in the mind of Tibetan doctors. It says that during the final five hundred years the elemental demons will suddenly send the *ye 'brog* demons. The *ma mo* demons and the 'sky-farers' cause 'bad diseases', i.e., epidemics. Wicked

non-Buddhists will prepare 'mixtures of materials' (*rdzas kyi sbyor*). At that time it is highly recommended to guard oneself and others (*lan gcig lnga brgya'i tha mar bab dus na / 'byung po rnams kyis glo bur ye 'drog gtong / ma mo mkha' 'gros nag ngan yams su 'bebs / mu stegs gdug pas rdzas kyi sbyor ba byed / de dus bdag gzhan srung ba shin tu gces*; *Rgyud bzhi* 655.2.; *Vaidurya sngon po* 1401.10). The term 'mixture of materials' (*rdzas kyi sbyor*) consists of 'combination / mixture' (*sbyor*) and 'substance / material' (*rdzas*). The latter specifically denotes materials and requisites used in sacrifices and sorcery. In modern Tibetan language, this 'mixture / combination of materials / substances' (*rdzas sbyor*) simply signifies 'chemistry, chemicals'. In this context it is also interesting to note that senior lineage doctors of Tibetan medicine in China's Tibetan areas, would often point out that it is 'modern' food – i.e., pesticides found in processed Chinese, non-traditional/ non-Tibetan food – that has produced new and more diseases among Tibetans than they had encountered before (information given by Mona Schrempf based on her fieldwork with senior lineage doctors in Nagchu in 2003 and in Amdo between 2005 and 2007) (cf., Schrempf, in this volume).

23. The same view was expressed by Tendzin Choedrak when he met medical doctors during his visit in Chernobyl in 1989 by pointing out to them 'our medical texts that since the eleventh century have been dealing with questions of contamination in connection with the progress of mankind and chemical experiments, which impair the ingestion of food and health. Our texts indeed indicate that social development also brings decline in ethical values and destruction of the environment' [in my own translation from German] (Tenzin Choedrak 2005: 329f). He explained this to Egbert Asshauer, a German doctor practicing and writing about Tibetan medicine: 'in very ancient texts it was prophesied that eighteen certain disease would occur among people of later times. These are the consequence of the increasing carelessness in dealing with nature and its protecting spirits that are driven away by deforestation, but also because of the pollution of the air, the soil and our food with poisonous substances. Even poisoning by sunbeams, corresponding to the ozone hole, was already mentioned then. By the destruction of the environment micro-organisms come into being everywhere in the atmosphere' (Asshauer 2005: 74; my own translation from German). Dr Trogawa Rinpoche is of the opinion that 'Another major cause for *nyen* diseases is pollution, which is so terribly devastating and harmful. Spirits are attracted to and live in polluted and contaminated earth, stones, and rocks and their breath infects man with diseases that had not existed until circumstances arose. Stress is also a contributory factor that weakens the immune system. In those cases, medicine at our disposal cannot help. An ancient Tibetan medical text states that synthetic products would one day be produced and that they would definitely induce the development of new diseases. Nuclear contamination is another crucial factor giving rise to more horrific diseases that man just cannot cope with or heal' (http://www.rinpoche.com/teachings/nyen.htm, accessed on 11.06.08; http://www.jcrows.com/nyen.html, accessed on 11.06.08).

24. See for instance the paper presented by Lobzang Tenpa (Men-Tsee-Khang 1998: 259ff); cf., Gerke, in this volume.
25. This concept of *sin* is not just restricted to the *nyendrä* disease but also forms a certain type of illness called *sin* disease (*sinné*). There is the basic classification of *sin* outside the human body, such as lice and nits, and inside the body. The latter can be classified in relation to the 'defaults' such as 'phlegm *sin*' (*péken sin*) and so on, the part of the human body that is affected by them, such as the 'brain *sin*' (*le sin*), 'skin *sin*' (*phag sin*) and so on, and their shape and colour. For instance, the 'bile *sin*' (*tri sin*) are said to resemble the thin hair of the body or the tip of a needle and they can affect the teeth, the eyes, the skin and the colon. The 'blood *sin*' (*trag sin*) are described as having no feet or legs. They are round and of red complexion. They live in the blood and move through all 'channels' (*tsa*). When disturbed, they are the primary cause (*gyu*) of all *nyen* diseases and 'leprosy' (*dzéné*). In addition, the black and white *yama* are two *sin* diseases (*sinné*) (see above for more on these, transcribed as *sinné* in the main text). Generally, there are eleven types of *sin* diseases. Because of improper behaviour, diet and the influence of disease causing demons (*dön*), they are disturbed and start to fight, resulting in a *sin* disease. Moreover, Tibetan doctors are of the opinion that, if undisturbed, the innate *sinbu* living in the body, of which 84,000 exist, help digestion, increase bodily strength and healthy complexion and are in general a helper of the body; this was also stressed at this conference (cf., Men-Tsee-Khang 1998: 235, Yeshi Donden 2000a: 197f, Yeshi Dhonden 2000b: 137).
26. In modern Tibetan this term stands for 'germs, bacteria, disease causing organisms, pathogens' (*nad 'bu*).
27. Egbert Asshauer outlines an interesting view by Amchi Dorje Rabten: '*Simbhus* do not belong to the subtle body … they are not related to energy. One opinion is today that they are a type of cells and body tissue that one cannot see. Another is that it is a living organism such as worms or bacteria. *Bhu* means creature, living thing. One can influence this system by medicine and I already include it in my thinking as being an essential component of the body; in particular, if skin rashes occur with unclear cause I think of worms and such like' (Asshauer 2005: 74; my own translation from German).
28. See note 26 above.
29. See note 22 above.
30. The official web presentation of the Men-Tsee-Khang announces that 'The base-line study went through 1998–2001 registering 638 cancer patients from 15 MTK's branch clinics. The study showed marked improvement in alleviating the symptoms; controlling the disease; improving the quality of life physically and mentally and pre-longing the lifespan. 9 patients were reported completely cured' (http://www.men-tsee-khang.org/newsletter/research.htm, accessed on 8 May 2008). I was not able to procure more data on this; therefore, I do not know what kind of cancer was treated, based on which diagnostic techniques and which kind of trial was done.

31. During the conference participants discussed what Ayurveda has to offer with regard to *cinnyi* and diabetes and *drä* and cancer. One has to note that today Tibetan doctors have forgotten or are not interested in the Ayurvedic roots of their own medical tradition. This is partly explained by the fact that they have to stand out against Ayurveda, also with regard to their Western clientele. No comparison with the Ayurvedic concepts of *drä* and cancer was undertaken at the conference, although, in my opinion, it would have been fruitful and even necessary since *drä* diseases are originally based on Ayurvedic concepts.
32. Yutog Yönten Gönpo relied on several sources in writing his description of *drä*, foremost among which was the *Aṣṭangahṛidayasaṃhitā* and its commentaries. The twelfth chapter of the aetiology (*nidānasthāna*) of this work deals with, among others, abscess (*vidradhi*) corresponding to inner *drä* (*khong 'bras*) in Tibetan. Thus one has the situation that the *drä* disease is nothing more than an abscess, following the widely accepted view that this is the Western equivalent for the Ayurvedic *vidradhi* in this context. Naturally, *drä* is a Tibetan adaptation made by Yutog Yönten Gönpo but it is firmly rooted in the concept of *vidradhi*. The aetiology and the symptoms are similar. One important feature of *vidradhi*, known in Tibetan as inner *drä,* is that after it had ripened, pus will burst out both upwards and downwards (*smin nas gyen thur gnyis kar rnag rdol 'gyur*, *Rgyud bzhi* 348.15). The ultimate source for this is the *Astangahridayasamhita* (Das and Emmerick 1998a: 122, 1998b; Hilgenberg and Kirfel 1941: 254). The concept of *arbuda* as a disease is not found in Tibetan medicine.
33. In the *Blue Beryl* Sangyä Gyatso discusses relevant passages from the *Aṣṭangahṛidayasaṃhitā* and its commentaries in order to illuminate the general symptoms of *drä*. On the other hand, one has to say that the *Aṣṭangahṛidayasaṃhitā* was always somehow seen as being Tibetan. This is embedded in the controversy over whether or not Tibetan medicine is Buddhist and the *Gyüshi* is expounded by Buddha (cf., Karmay 1988; Czaja 2005/2006a, 2005/2006b, 2008). The result of this dispute (whether it is written by Buddha) deeply influenced the thinking of Tibetan doctors and prevented them from developing a critical attitude towards it. Among Tibetan doctors in exile today one cannot find any analytical study of the *Gyüshi*, its origin, development and validity. No effort has been made to trace the alleged Sanskrit original that was supposedly translated; in addition, there are no studies authored by Tibetans on how medical ideas developed and are related in Tibetan medicine. Many Tibetan medical practitioners recognize the Chinese and Ayurvedic influences in Tibetan medicine; yet many doctors of Tibetan medicine seem to have little interest in inquiring further into these connections. One might argue that the unique character of Tibetan medicine is enhanced by ignoring or minimizing relations with other medical systems. Yet, this lack of interest in Tibetan medicine's historical roots can, in the end, lead to problematic results.
34. See, for example, Tendzin Namdul et al. who state that 'ancient texts of Tibetan medicine outline the successful management of diabetes' (Tenzin Namdul et al.

2001: 176–77); or the statement given on cancer treatment by doctor Yeshi Dhonden: 'Nothing about Western sensibilities lends itself to comprehending the mysteries of the East.' So why would Dhonden run the risk of potentially being discredited not only personally but in terms of the effectiveness of Tibetan medicine? 'I think it's impossible that careful, open-minded scientific research into Tibetan medicine for breast cancer will indicate that it has no efficacy at all', he says. See the report on Dr Yeshi Dhonden (http://www.buddhapia.com/tibet/dr_dhonden.html, accessed on 11 June 2008).

35. *Rgyud bzhi* 348.5–349.7, *Vaidurya sngon po* 796.7–798.10. The *Gyüshi* and the *Blue Beryl* are the textual basis for the most popular understanding of *drä* diseases, although it must be added that Sangyä Gyatso's commentary is just one way to interpret the *Gyüshi*. Others exist as well. From a Western academic perspective a text-critical and analytical study would be mandatory for a full evaluation of the relevant part of the *Gyüshi*, including a detailed discussion of the *drä* disease in Tibetan medical thinking of the past in as far as it is preserved in texts. For our purposes, one can neglect the need for a full in-depth study, including all Tibetan commentaries on relevant parts of the *Gyüshi*. Such detailed exegesis is not usually done by contemporary Tibetan doctors. In the case of this conference, they relied only on one commentary, the *Supplement.* Instead, I offer a few remarks which might be helpful for a more complete understanding.

36. The technical term *dram trug* consists of two parts: *dram*, which means 'to be or get spread, dispersed, scattered' and *trug*, 'to get disturbed, stirred up, mixed up'. This term is not explained by Sangyä Gyatso in his commentary but is simply repeated; we therefore do not know how he understood it. Both words are well-known as designating two types of fever, namely 'irritation fever' (*dramtsé*) and 'agitated or disturbed fever' (*trugtsé*). Notably, the personal physician of the Dalai Lama Lobzang Wangyalchog explains the term *dram trug* in this context of *drä* by both these types of fever (Men-Tsee-Khang 1998: 161f). Actually, this is not very convincing as it would imply that among the causes for *drä* there are two types of fever. How other Tibetan doctors understand this is unknown to me. In my opinion, one should see it differently and not restrict oneself to find mechanically corresponding passages in the *Gyüshi.* It is more fruitful to consult other writings of Yutog Yönten Gönpo. In a treatise composed by him in order to refute the criticism raised by opponents, he also treats this point, which was obviously questioned by others. There he writes: 'What is the distinction between *'grams* and *'khrugs*? If you maintain that *'grams* is basically *'khrugs* and *'khrugs* is basically *'grams*, then (one) should (explain) that it is a distinction of the secondary cause (*rkyen*) only. It is *'grams*, (if) the bodily strength (*lus gzungs*) is scattered by the (secondary cause, *rkyen*) of behaviour only and (by this) the 'defaults' are rising. It is *'khrugs*, (if) the "defaults" are suddenly disturbed by the four (secondary causes, *rkyen*), (namely) season, demons, diet and behaviour, and cause harm to the bodily strength and the odour' (*'grams 'khrugs kyi khyad cis 'byed / 'grams pa*

yang 'khrugs pa yin / 'khrugs pa yang 'grams pa yin zer na / spyod lam kho na'i rkyen gyis lus zungs 'grams nas nyes pa bslangs pa 'grams pa yin / dus gdon zas spyod bzhi yis nyes pa glo bur du 'khrugs nas zungs dang dri ma la gnod par byed pa 'khrugs pa yin pas rkyen tsam la khyad par yod do bya'o), *Rtsod bzlog* 329.14.

37. This idea, borrowed from Ayurveda, is also expressed in the *Aṣṭangahṛidayasaṃhitā* (cf., Hilgenberg and Kirfel 1941: 658f).
38. The distinction between inner and outer can be also found in the *Aṣṭangahṛidayasaṃhitā* (Hilgenberg and Kirfel 1941: 253f). The group of three outer *drä* is not taken from this, even though mention is made in this source of skin, muscles and so on. This concept can, however, be found in the earliest Tibetan medical texts known today, the *King of the Moon* (*Zla ba'i rgyal po*), *Zla ba'i rgyal po*, 109.22.
39. Sangyä Gyatso states that the bones are consumed by pus spoiling the sap.
40. The *Rgyud bzhi* literally reads: 'pus-water nits burnt juice will appear' (*rnag chu sro ma khu tshigs 'byung ba yin*). Sangyä Gyatso decided to understand it in the way given above. Kyempa Tsewang writes that 'burnt pus like nits will appear in thin "yellow fluid"' (*rus 'bras kyi rnag chu sra mo ni chu ser sla mo'i khrod du rnag tshigs sra mo lta bu 'byung ba'o*), *Skyems pa 'grel pa II* 276.10. The same is found in the *Oral Instruction of the Ancestor* (*Mes po'i zhal lung*) III 460.3. However, Yutog Yönten Gönpo probably had something different in mind. In this 'Minor Tantra' (*Rgyud chung*) that can be regarded as a treatise in which he was expounded on his medical knowledge before he wrote the *Gyüshi,* he explains this specific *'bras* with the words: 'pus-water having nits and burnt juice will appear' (*rnag chu sro ma can dang khu rtsegs 'byung*), *Rgyud chung* 920.13.
41. According to the commentarial literature, this longing for food (*zätren*) should be understood in the sense that one desires food but, having eaten it, one vomits immediately.
42. See note 41 above.
43. *Lhan thabs* 214.1–215.1.
44. The Tibetan text reads 'thief, robber' (*rkun bu*) which naturally does not make much sense in this context. Another option would be to see it as a particular liver disease. However, this is not applicable here either. One therefore has to conclude that a textual corruption is likely. The most probable correction would be to read this word as a type of small insect (*gumbu*) which is related to the Tibetan word for bird feed (*rkun bu* or *rgum 'bu*). How Tibetan doctors interpret the term *rgum 'bu* is currently unknown. In one example, apparently based on a description of the disease from the *Supplement*, Yeshi Donden (2000a: 202) writes with respect to *drä* that the disease indicates 'an increase of bad blood and lymph in the body. These swellings increase without the patient's knowledge, as if stealthily; then, wind brings these together in a mass.' Therefore it seems he takes *rgum 'bu* as it is and interprets it accordingly. One might perhaps comment that in Tibetan medicine the patients are usually not aware of the physiological principle of 'wind'

bringing something together in her or his body, whether stealthily or openly. It seems unlikely to me that Sangyä Gyatso intended, by violating Tibetan grammar, to express such a view. In my opinion it could be that, if the correction is right, Sangyä Gyatso, or the source he made use of, wanted to include the observation that wounds and abscesses can be infested with tiny insects or worms, as is also stated in the Tibetan versions of the *Aṣṭangahṛidayasaṃhitā*.

45. This description is not restricted to the *Supplement* of Sangyä Gyatso only, but can also be found in other medical treatises. However, the metaphors employed there can differ.
46. See note 41 above.

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Chapter 12

Re-integrating the Dharmic Perspective in Bio-Behavioural Research of a 'Tibetan Yoga' (*tsalung trülkhor*) Intervention for People with Cancer

Alejandro Chaoul

Introduction

'Channel breaths' or *tsalung*[1] and 'magical movement' or *trülkhor* are distinctive Tibetan mind-body practices in which breath and concentration of the mind are integrated with particular body movements. They have been part of spiritual training in Tibet since at least the tenth century CE. The globalization of the twentieth century has not only allowed many of the Eastern mind-body practices to take root in the West, but some practitioners have also adopted what anthropologist Joseph Alter calls practices of 'modern medical yoga' (2005).

At the turn of the twenty-first century, a randomized controlled clinical trial using channel breaths and magical movement practices was conducted at the world's largest medical centre; the practice was called 'Tibetan yoga'. Together with a team of bio-behavioural scientists, I helped to develop two pilot studies to examine the benefits of this Tibetan yoga-based intervention programme for people with lymphoma and breast cancer. These studies led to a scientific publication in the journal *Cancer* and a grant from the National Institutes for Health (NIH) to evaluate the possible benefits of a Tibetan yoga intervention in women with breast cancer undergoing chemotherapy. The application of these Tibetan mind-body

practices in contemporary medical settings suggests that these ancient yogic practices are beneficial adjuncts to conventional medicine and contribute importantly to the well-being and quality of life of people with cancer. The studies also raised important questions: should we consider these benefits solely under the realm of medicine? Have we lost the magic and contemplative/mystical benefits by bringing them to this modern setting? Looking into epistemological questions of the partnership of Tibetan mind-body practices and Western bio-behavioural medicine, this chapter suggests that we do not necessarily need to use a reductionist model of one or the other side. In other words, there is a possibility of an inclusive dialogue where both perspectives are integrated. In fact, in that integration, we are sometimes able to witness a dual process wherein as well as the medicalization of yoga theory and practice, the reverse also appears: the 'yogification' of scientific medicine:[2] 'Rather than assenting to physiological reduction in the one case, and dismissal as pre-scientific in the other, we should look for a wider context of understanding within which both kinds of approach can be seen as part of a coherent view of human beings and human existence' (Samuel 2006: 72). Tibetan mind-body practices, such as channel breaths and magical movement, reached a pinnacle in the thirteenth century after the Tibetan eleventh- and twelfth-century Renaissance – a period when the body resurges as a centre of attention for practice, such as in the yogini and other Tantric practices. Centuries later, it regained importance in the nineteenth to twentieth centuries, during the non-sectarian movement (*rimé*), the time when Shardza Tashi Gyaltsen, one of the most widely recognized Bönpo *lama* of recent times,[3] synthesized many Bönpo teachings, and among them channel breaths and magical movement. It could be argued that Shardza's work paved the way for the migration and medicalization of these practices and their integration into contemporary bio-behavioural medical environment. Mind-body practices such as meditation and yoga have become extremely popular in Europe and the U.S. in the last decade as a way to reduce stress and enhance spiritual growth. This is especially true for medical populations.[4] Many people with cancer believe that stress plays a role in the aetiology and progression of their disease.

The randomized controlled trials using a Tibetan yoga programme for people with cancer presented here are among such mind-body practices, and the emerging field in North America and Europe of Complementary and Integrative Medicine (CIM) provided a useful framework for that engagement to take place. However, the trials were not without challenges,

as they demanded a dual engagement and open dialogue of the bio-behavioural scientists and the Tibetan practitioners. That engagement and dialogue shaped the framework. Amongst the issues addressed were the need for appropriate translational models, in which both types of practitioners can play an important role without dismissal or reductionism of any position.

In the last couple of decades the dialogue between science and spirituality, in particular Buddhism, has slowly begun to take root. An important example can be found in the dialogues begun by the Chilean neuro-biologist Francisco Varela and H.H. the Dalai Lama through the Mind-Life Institute, which became open to the public in 2003 through various conferences.[5] Those dialogues offered a wider context of understanding, as described by Samuel in the above quotation, allowing the space for this kind of research to find a more comfortable home.

In that fertile environment, since 2000 a team at The University of Texas M.D. Anderson Cancer Center (M.D. Anderson) in conjunction with the Ligmincha Institute, an international centre for Bön study and practice in Charlottesville, Virginia, has conducted two pilot randomized controlled trials (RCT), utilizing what was called a 'Tibetan yoga' intervention (hereafter TY), which consisted of the channel breaths from the *Mother Tantra* (*Ma rgyud*) and magical movement from the *Oral Transmission of Zhang Zhung* (*Zhang zhung snyan rgyud*).[6] Both studies utilized the same intervention. The first one was conducted for people with lymphoma and the second for women with breast cancer. A brief summary of the studies and their results will follow,[7] and more detail information of the first study can be found elsewhere (Chaoul 2007).

On 10 March 2006, the U.S. NIH awarded a large National Cancer Institute grant to this team to support a five-year randomized trial to examine a TY programme for women with breast cancer undergoing chemotherapy. Based on previous findings and participant and instructor's feedback, the intervention was adjusted to focus more exclusively on the channel-breath Tibetan yogic practices from the Bön *Mother Tantra*. In this chapter I will explain the new intervention, which is the current TY intervention the team is using, and explore some of the reasons for these adjustments. The new intervention, now in place, was shaped through dialogue between the biomedicine research team, led by Lorenzo Cohen, Ph.D., and the Tibetan Bön spiritual tradition advisor, Tenzin Wangyal Rinpoche of the Ligmincha Institute. I believe this exemplifies one model of successful integration of traditional Tibetan mind-body practices and

the contemporary Western medical establishment. Undoubtedly, this encounter, which has been going on for ten years, has not only put Western scientific ideas on medical research in dialogue with Tibetan *dharmic* practice; it has also allowed for changes in both sides towards finding a sound methodological research, and more importantly, bringing some benefit to people with cancer and their families.

Earlier Studies

The M.D. Anderson-Ligmincha team examined the effects of a TY seven-session programme that included mind-body practices from the Tibetan Bön tradition, channel breaths from the *Mother Tantra*, and magical movement from the *Oral Transmission of Zhang Zhung*. The intervention, chosen in consultation with Tenzin Wangyal Rinpoche, consisted of four main components, described as follows: 1) breathing exercises; 2) meditative concentration; 3) channel breaths sitting yogic postures; and 4) magical movement yogic postures involving more physical movement. These components have been used in the Bön tradition for centuries, and were chosen as an intervention specific for cancer patients undergoing treatment (chemotherapy or radiation) or having completed treatment in the last twelve months, with the intention of helping in their recovery and buffering any side effects of the treatment. Participants were taught this programme as a progressive didactic and experiential set of classes with the aim of helping the patient incorporate these techniques into their everyday lives. From the Tibetan tradition perspective, these practices clear away obstacles (*gegsel*)[8] and enhance one's meditative state of mind (*bogdön*) to then incorporate that cultivated meditative state of mind into everyday behaviour (*jöpa*).

The breathing exercises help participants not only to regulate their breath, but also to calm their mind, and help in clearing physical, emotional and mental problems. The meditative concentration techniques help to harness the calmness of mind towards self-observation and use the breathing exercises to clear away obstacles. Participants also learned meditative concentration techniques with sound and visualization. The channel breaths exercises work by applying the meditative concentration techniques and the breathing exercises learned previously to different areas of the physical body, and the energetic centres (Tib. *khorlo,* Skt. *cakra*), to help participants to relax and feel invigorated. The magical movement exercises involve more body movement than the channel breaths, and help

to cleanse different areas of the body through the integration of the movement to the meditative and breathing techniques. All classes were taught by instructors authorized by the Ligmincha Institute, and ran in one-hour sessions, once a week for seven weeks. This gave participants the opportunity to learn the techniques and practice them with the instructor, so that they could then continue to practice them on their own. At the end of each class, the participants received printed material to take home and use as support for the techniques learned in that session. At the end of the course, the participants were given a CD with guided practices of all the techniques. Participants were advised to continue daily practice at home in addition to the class at the clinic and also to continue their practice after the seven-week course was over.

Patients completed different measures, including intrusive thoughts and avoidance behaviours, depressive symptoms, sleep disturbances, fatigue and quality of life at baseline, one week, and one and three months after the last class (Cohen et al. 2004). A wait list control group followed the same measures and assessment times. In other words, the control group participants had the opportunity to receive the TY programme after the three-month follow-up assessment, hence the name 'wait list'.

Pilot Study I – TY for People with Lymphoma

In the year 2000, the team conducted a randomized controlled clinical trial to determine the feasibility, acceptability and initial efficacy of the TY programme described above for people with lymphoma (Hodgkins and non-Hodgkins) (see Cohen et al. 2004). In this first pilot study, thirty-nine people with lymphoma were randomly assigned to either the TY group or to a wait list control group. The intervention group received the seven-week TY programme; the wait list control group could receive the instruction after the end of the study. Patients had to be currently undergoing treatment or had to have completed treatment within the past twelve months.

There was an even distribution of severity of disease among those who were under active treatment between the two groups. Patients completed self-report evaluations at baseline (i.e., before they began the programme) as well as one week and one and three months after the seven-week programme. The seven-week sessions began after each recruitment cycle, which allowed the classes to be comprised of four to nine people in each session. Eighty-nine per cent of TY participants completed at least two to three sessions; fifty-eight per cent completed at least five sessions. Overall, the results indicated that the TY programme was feasible and well liked by

the patients. The majority of participants indicated that the programme was 'a little' or 'definitely' beneficial, with no one indicating 'not beneficial', and they continued practicing at least once a week, with many continuing to practice twice a week or more.[9] The study results indicated that the TY groups reported lower overall sleep disturbances.[10] Improving sleep quality in a cancer population may be particularly salient as sleep is crucial for recovery. Fatigue and sleep disturbances are common problems for people with cancer.

Pilot Study II – TY for Women with Breast Cancer

A second study, in 2003, examined the benefits of the same seven-week TY programme for women with breast cancer. Women with stage I-III breast cancer who were undergoing active treatment (radiotherapy or chemotherapy) or who underwent treatment less than one year prior to enrolment were recruited to participate in the study. Fifty-nine women were randomly allocated to either the yoga group or a wait list control group. On average, the participants in the TY group said they found the programme useful or very useful, and they practiced it around twice a week.

Pilot Studies: Persistent Questions

According to standard RCT indicators, both the lymphoma and breast cancer studies showed degrees of benefit to patients who participated in TY. For example, the breast cancer study reports that 'A mixed model analysis, controlling for the dependent variable at baseline, revealed a group by time effect with respect to Impact of Event Scale (IES) total scores (p=.03)' (Chandwani et al. 2008: 15). While this may be significant, how are we supposed to understand these outcomes in terms of Tibetan yogic concepts? Is there any correlation between the results and the way *lung* circulates in the channels? Can any of these bio-behavioural measures be translated in a way that shows the bi-directional flow of models of accounting for subtle biological changes?

Clearly, the way we measure 'outcomes' requires a translation that incorporates yogic notions into Western science while at the same time 'scientizing' yoga concepts. In other words, as we try to interpret yoga in scientific terms we see the bi-directional flow of models, where there is a 'scientizing' of ancient yoga concepts and a 'yogification' of scientific numbers and measurements (similar to the 'Tibetanizing' mentioned in the introduction to this volume). These are part of the challenge of the

globalization and medicalization of Tibetan yoga and other ancient mind-body practices. For example, in the study

> descriptive statistics and a graphical display of the data indicated that the yoga group reported lower IES scores than the control group by the 3–month assessment (adjusted means: 17.1 vs. 20.1). A multivariate linear regression, controlling for baseline, revealed that the yoga group reported lower scores for cancer-related symptoms at the 1–week follow-up than the control group (change in means: -8.1 vs. 3.9, $p=.04$). We also found a marginal difference for changes in sleep quality (low scores indicate better sleep quality; TY = -0.4, WLC = -0.1, $p < 0.1$). This study was underpowered for extensive analyses, however, again the means were in the expected direction. The results of this second study indicated that the TY programme was feasible and well-liked by women with breast cancer (Chandwani et al. 2008: 15).

Is it enough to know that the 'means were in the expected direction'? Is this a way of saying the results were 'good enough'? Is there anything we can say from the yogic perspective? Can we correlate better sleep quality, for example with a calmer mind, or the breath flowing easier through the channels?

These pilot programmes are among the few studies of yoga in a cancer patient population and the only scientific study of Tibetan yoga in any patient population. Based on the results of these studies, the NCI then funded the M.D. Anderson-Ligmincha group with a 2.4 million five-year grant (R01) to examine the effects of TY for women with breast cancer undergoing chemotherapy. From a *dharmic* side this grant was also an important step. It was at this point that, again, I began to reflect more on how to examine these studies and their results beyond the bio-behavioural perspective in which they had been positioned and re-integrate the *dharmic* perspective, through a *sowa rigpa* sensibility. In other words, we are now working to find that bi-directional translation.

Current Study

The M.D. Anderson-Ligmincha team is now conducting the larger TY study funded by the NCI, in which women in the TY group are being compared to women who learn some simple stretching exercises to match the physical movements of the channel breaths practices but that do not have the spiritual cum philosophical framework that TY provides, and to women in a wait list control group who, after being in the control group and filling out the assessments up to one year, can learn the TY programme. The study is

measuring the possible stress relief, improvement of Quality of Life (QOL), and immune system level (through blood analysis) as well as reduction in anxiety and sleep disturbances that the TY intervention can provide to women with breast cancer undergoing chemotherapy, in comparison to the two control groups: those doing the stretching exercises and to those receiving standard of care. In addition, the study will measure outcomes in terms of psychosocial models of benefit finding and spirituality.

Based on the experience of running the pilot studies, the team decided to make some changes in the TY intervention. In essence, the main modifications for this current study were:

1. Adding one more active control group: stretching.
   As the study grew from a pilot to a larger federally funded study, the research group decided to add another control group, in addition to the standard of care. With evidence that exercise can help QOL (quality of life), fatigue and physical functioning,[11] a stretching group was added as a control group, so that patients could be randomly allocated to any of the three groups: TY, stretching or standard of care. The stretching movements came from breast cancer exercise manuals (Davis 2002; Halverstadt and Leonard 2000) and were chosen to match, in the best way possible, the physical component of the channel breaths movements.
2. In the TY group: focusing deeper on channel breaths and not including the magical movement practices in the larger study.
   Responding to patient's comments on the TY group that there were too many movements to be learned and practiced, the M.D. Anderson-Ligmincha team decided to focus only on the channel breaths movements and not include the magical movement component. Participants in this study now learn the different components of this TY programme in seven sessions which include: awareness of mind and breath, which, using a metaphor from the *Mother Tantra* is called 'the rider and the horse'; the nine breathings of purification; and the external channel breaths movements from the *Mother Tantra*. In order to focus deeper on the channel breaths movements participants learn how to use the channels in these practices by learning a 'classic' set of nine breathings of purification (*gulung sang*). Through these, participants may also strengthen the power of the concentration of the mind and utilize the power of the breath to cleanse obstacles and nurture themselves at the physical, emotional, mental and spiritual levels. As they continue practicing the breathings and the channel breaths movements, participants may also strengthen

the experiential understanding of mind-body practices and the understanding of their own 'subtle body' (an inner experiential dimension that will be explained below).

3. Also in the TY group: add booster sessions.
   To facilitate the patients' engagement with and understanding of the practices, more booster sessions were added. During these booster sessions the patient has another opportunity to ask any question or express any doubts about the practices as well as do a full practice session with the instructor.

Translating Yoga into Science

The ancient Tibetan texts and the oral teachings make it clear that the combination of the physical posture, the mind's focus, and the guidance of the vital breath currents have the power to release external, internal and secret obstacles.[12] Furthermore, as mentioned earlier, these practices help to enhance one's meditative state of mind, which can then be incorporated into everyday behaviour.

Our hypothesis was that, through these TY practices, people with cancer would be able to alleviate the mental and physical stress caused by the severe side effects of cancer treatment, such as chemotherapy or radiation. The breathing exercises help participants not only to regulate their breath, but also to calm their mind, and help to clear physical, emotional and mental obstacles. Pain, anger and intrusive thoughts are just some examples of these obstacles, respectively, that these patients may encounter. The meditative concentration techniques help the patients to use the calmness of the mind towards self-observation and guide their breath in a way that helps them to clear away obstacles. The channel breaths movements from the *Mother Tantra* work by applying the meditative concentration techniques and the breathing exercises learned before with different areas of the physical body and the *cakras*, to help participants relax and feel invigorated. In other words, as they practice, participants can achieve a sense of release from obstacles, maintain a calmer and clearer state of mind, and have more opportunity to apply these abilities in their everyday life.

For the study, these practices were written up into a manual that act as support to the instructor's lesson, with the information gradually being introduced to the participants across the first four sessions, each is accompanied by a DVD, so that they have some audio and visual support to enable them to continue the practice at home. The language in which

the practices are explained is simple, and the manual is also illustrated with photographs. This is certainly more 'digested' or 'student friendly' than the *dharma* practices in their traditional environment, where the student needs to put a great deal of effort in receiving these precious teachings. However, this is also the case in *dharma* centres in the West, although probably not to the same extent. Furthermore, it could be said that in the case of people with cancer, because of their difficult condition, they are already putting in an effort in joining this study. Nevertheless, the practices are in conformity with the Bön tradition from which they originate, and were developed for this clinical setting under the supervision and advice of a lineage holder of the tradition, Tenzin Wangyal Rinpoche. In addition, of course, is the issue of the modernization, scientification and medicalization of these practices, which are reflective of themes that run throughout this book.

Lung and *Tsalung*: Operating 'between' Religious and Scientific Epistemologies

Tibetan medical texts, from both the Bönpo *Medical Collection* (*'Bum bzhi*) and the Buddhist *Four Tantras* (*Gyüshi;* see Sangpo 1999), explain the 'science of healing' (*sowa rigpa*) in terms of balance of one's internal constitution defined by the three *nyépa* and the five cosmo-physical elements, as mentioned in the introduction to and throughout this book. Health in this context is not solely the concern with the body's illness or disease, but, most importantly, the harmony of body, energy and mind. The channel breaths practices also involve body, energy and mind with the aim of balancing the five elements and three humours.

Among the three *nyépa*, *lung* – the 'wind' humour – is described as having five distinctive kinds: upward-moving (*gyendugyu*), life-upholding (*sogdzinpa*), fire and equanimity (*mé nyampa*), pervasive (*khyab*) and downward-clearing (*thurdu selwa*) 'wind' or vital breaths. Interestingly, the Bönpo *Mother Tantra* describes a set of five channel breaths movements, where each movement is explained in terms of the same five *lung* as above and the Tibetan medical texts (also equivalent to those in the Indian medical system of Ayurveda).[13] Furthermore, each movement is said to correspond to one of the five elements: earth, space, fire, air and water respectively.

Channel breaths practices are certainly not unique to either *Mother Tantra* or to Bön, but it seems that having a channel breath movement for each of the five vital breath currents is quite unique to the Bön *Mother Tantra*.[14] As the vital breath current is brought to each of these energetic

centres and held there, it subtly moves, expressing the energy of that energetic centre with a shape (*yib*) and a specific colour. Commenting on these channel breaths practices from the *Mother Tantra*, Shardza Tashi Gyaltsen instructs the practitioner that in order to enter well into the path of this method of channel breaths practices, one must first train in the concentration of the mind and 'avoid falling after deluded thoughts' (*trüjam*) (Shardza Tashi Gyaltsen 1974b: 28).

In the clinical research studies that are the focus of this chapter, patients first learn to concentrate their mind as they stay in a sitting posture, then learn to utilize the breaths and finally to integrate the channel breaths movements, and to use these practices to work through whatever issues come up in their lives, whether it be physical pain, emotional distress, mental stress, etc. Also, once they learn to calm their minds and work with their breath and the body movements, they are taught more about the subtle body and channels so to perform the breathings and the channel breaths practises utilizing their channels. A number of patients reported feeling calmer, in less pain and more focused after a session of breathing, meditation and channel breaths movements.

A nurse from another hospital, who is also a *dharma* practitioner, was happily surprised that we were 'pushing the envelope' in this way. Does one need to be a *dharma* practitioner in order to use the channels? Can we find a framework to explain and utilize them without being marginalized or hidden? Tenzin Wangyal Rinpoche's description of *lung* to a broader Western audience may prove useful here:

> We can sense prana [*lung*] directly at the grosser levels in the air we breathe. We can also sense its flow in our bodies. It is at this level, in which prana can be felt both in its movement and in its effects, that we work in Tantra. We become sensitive to and develop the flow of prana using mind, imagination, breathing, posture, and movement. By guiding the grosser manifestations of prana, we can affect the subtle levels. As our sensitivity increases, we can directly experience prana in subtler dimensions (Tenzin Wangyal 2002: 77).

This suggests that everyone who practises these sorts of exercises, not just Tibetans or *dharma* practitioners, can become more sensitive to the subtle aspects of breath, body and mind. Channel breaths practices are crucial in the training and harmonizing, or balancing (*nyom*), of the channels and the vital breath currents of the practitioner, within a *dharma* context and also within a medical environment. Put simply, in these practices the

practitioner becomes familiar with the channels first through visualization and then by using the mind to direct the vital breath currents along those channels. In this way, one allows the vital breath currents to circulate through one's channels more evenly in terms of the rhythm of the inhalation and exhalation, and seeks a greater balance in terms of the amount and strength of the breath through the different channels. The mind is said to 'ride' on the vital breath currents, like a rider on a horse, and the two travel together through the pathways of the channels.[15] By familiarizing themselves with the channels in this way, patients can do these practices more deeply, working through their current issues in their lives, whether related to the cancer itself or to other aspects. This is a way to open the door to better quality of life, a term that has become more and more important in bio-behavioural research under the acronym QOL.

Mind-Energy-Body: Subtle Body as a Ground for Dialogue?

Mainstream Western medicine supposes a far more ironclad division between physical illness and energetic or mental obstacles, and thus it becomes difficult for most Western physicians to accept the connection that Tibetan medicine sees between the health and meditative benefits, including those of yogic practices. Part of this difference may arise from the dichotomy between mind and body that Western thought inherited and absorbed from Cartesian dualism. In contrast, in Eastern thought, a subtle or energetic body or dimension mediates between mind and body.[26]

In Buddhist and Bön teachings, especially from the Dzogchen perspective,[27] one's physical body, speech or energy, and mind are known as the three doors through which one practises the methods (*tab*) and realizes or re-discovers one's own primordial wisdom (*yéshé*).[28] Within the speech or energy realm, there is a subtle energy body that emerges both metaphorically and, for some, in actuality. This subtle energy body or adamantine body (*dorje lü/ ku* analogous to the Sanskrit *sūskṣma śarīra*) is composed of channels (*tsa*) and vital breath currents that run within them, providing the landscape where the mind and the physical body connect with each other. Channel breaths and magical movement are practices in the Tibetan yogic tradition that work specifically with the energetic or subtle body. As Samuel rightly asserts, '"subtle body" concepts … represent aspects of these traditions that are problematic for biomedical science' (Samuel 2006: 79). Furthermore, Tibetans involved in this dialogue may also find it problematic. For example, in discussions with Thubten Jinpa,

one of H.H. the Dalai Lama's translators, who is also very much involved in these dialogues through the Mind-Life Institute, expressed concern regarding the concept of subtle channels in Western medical settings, since it could be seen as 'religious' and thus in possible conflict within a secular setting. Therefore, the difficulty of applying these Tibetan concepts does not lay merely in their marginalization by the Western biomedical communities but maybe also by Tibetans themselves, although their reasons for doing so may be quite different. Ivette Vargas, for example, looks at how contemporary Tibetan medical doctors in the Tibet Autonomous Region, China (TAR), deal with those illnesses caused by the nāga (*klu*) spirits, observing that 'At the medical college, students are taught that *klu* and *gdon* either do not really exist or are mental projections of some kind (instead of focusing on what the historical medical texts state and/or exploring their underlying religious ideas).' (Vargas in press, p. 389). Vargas adds that these diseases are discussed in the Medical College in Lhasa and the Tibetan Medical Hospital 'using different terms, for instance substituting *mdze nad* (leprosy) instead of *klu'i gdon nad*' [spirit-provoked illness by nāgas] (Vargas in press, p.390).

In Western medical institutions such as M.D. Anderson, CIM and in particular these Tibetan yoga studies may provide the right context to turn this into an opportunity to bridge both sides and create a bi-directional dialogue. Garrett (2008:70) argues that although medical texts such as the *Gyüshi* did not necessarily describe the channels in exactly the same way as *dharma* texts, 'it is clear that many Tibetan medical scholars over the centuries have been concerned with reconciling the two systems, and that the discrepancies bothered them.' This dialogue in twelfth-century Tibet between *dharma* and medicine may even be understood as a 'medicalization' of those practices and viewpoints that have their roots in religious or spiritual traditions. And the other side was there too. The twelfth-century Sakya master Drakpa Gyeltsen asserted that an understanding of subtle physiology was of vital importance for the religious contemplative. 'Attempting contemplative practices without a clear understanding of the body, is like trying to milk an animal by tugging his horns,' he illustrated (Garrett 2008: 70). This may be related to an incipient 'yogification' aspect, where the practitioner needs to understand some of the science of his/her own inner physiology, even if this is from a first-person perspective, a theme to which we will return.

The *Quintessential Instructions of the Magical Movements of Zhang Zhung*, the source of the magical movements for the TY study, emphasizes

the importance of 'preparing the pathways of the channels, [by] purifying the channels and vital breath currents' (Chandra and Namdak 1968: 632.2–632.3). Shardza's *Commentary* of this text describes it more explicitly as follows: 'Regarding rooting out poisons associated with the vital breath currents and training the channels, [first] forcefully expel the coarse breath current through the right [channel/nostril], [and then] leisurely inhale long breath currents through the left [channel/nostril]' (Shardza 1974a: 322.2–322.3). This is clearly in agreement with Drakpa Gyeltsen's exhortation of the meditator understanding the subtle physiology. This particular breathing practice through alternate nostrils is usually practiced as the set of nine breathings of purifications mentioned earlier. With powerful exhalations and nurturing inhalations, the practitioner clears away the obstacles, discomforts and disturbances that are the poisons (*du*g) that impede the flow of the vital breath currents. In other words, the channels are paths for both the vital breath currents and the mind, which together flow like a horse and the rider on it and are able to clear away those poisons that could be physical, emotional, mental or even spiritual.

Women with breast cancer in the current TY study learn the nine breathings of purification, which is a common foundational set of breathing among Bönpo practitioners, both lay and monastic. Once they learn the mechanics of them, they learn the subtle body inner structure and physiology. Tibetan texts explain how when the mind is distracted by one of the afflictions – such as anger, attachment and unawareness – when the vital breath current is interrupted by one of the illnesses (*né*), or when there are spirit-provoked obstacles (*dön*), the vital breath currents cannot flow in the proper way, together with the mind, through the channels. Thus, with the help of the nine breathings of purifications, the patients can get rid of whatever discomforts exist. Tenzin Wangyal Rinpoche emphasizes that it is important that the discomforts that the patients work with are 'fresh, personal and recent'.[19] In other words, it is not as powerful to work on something that they think they might feel or something old that they are trying to remember from childhood. Instead, working on something that, at the moment of practice, arises as a personal obstacle to them will have a greater effect. People with cancer tend to focus on physical pain and anecdotally report how after the practices the pain diminishes and even disappears. Others have mentioned how their anxiety is reduced after just one session. In other words, some of their obstacles are reduced or dissolved.

Utilizing these ancient practices in this way can be seen as constituting a way of breaking open the space of biomedicine to include these benefits

in its repertoire. Or, simply expressed, perhaps we can think about such dialogues as possible bridges to communicate the wisdom of these ancient practices to Western scientists, patients and practitioners. It is crucial to have Tibetan teachers who were trained in the traditional system but who lived and taught in the West working on such projects, since they clearly understand these translational issues. Tenzin Wangyal Rinpoche's role as advisor to these projects was particularly important in relation to the issues of applying these practices to the modern, Western biomedical world without over-medicalizing them. And of course, the openness and caution of integrative medicine professionals, such as Dr Cohen, were crucial in not over-yogifying or over-Tibetanizing them either.

Our studies clearly benefitted from this team work and from working with CIM as a starting point: an area of medicine that can be said to be already prone to Eastern modalities and philosophy or at least which shares many points of convergence, where mind-body practices are seen as a part of it, which eases the way in which the principles of Tibetan medicine enter in dialogue.

CIM: an Epistemology to Frame the Dialogue

Over the last eleven years during which this research has been going on, I have often reflected upon how it can 'make sense' from the Tibetan medical perspective. When I met Dr Cohen for the first time, my concern was with what would we be measuring; later conversations with Tenzin Wangyal Rinpoche brought up similar questions including, 'can we measure "open-heartedness"?' Fortunately, Dr Cohen was open to these questions, even if we have not yet found ways of measuring them. The *sowa rigpa* sensibility was slowly manifesting itself. Although many of the things discussed did not make it into the study, the openness of our continuous dialogue was a constant sign of the latent potentiality, of the open space that allowed these things to manifest when conditions were ready. These encounters help us to go beyond the limits of materialism, expanding the frame of reference to one that is inclusive and yet also acceptable for both sides of the medicine between religion and science dialogue which is at the heart of both these studies and this book.

These studies are not necessarily conducted to prove one tradition right and the other wrong, but rather to highlight the efficacy of meditative and yogic techniques that exist in some of these centuries-old traditions from the East, and to reinforce the idea that there can be health benefits by applying them in Western medical settings. In conversations with Ragu-

ram, a master from the hatha yoga SVYASA tradition of Swami Vivekananda, we discussed the need to start looking into measurements that relate to the yogic traditions themselves. Samuel's concern – that leaving elements such as the spirits out of the formula might be seen to be part of Alter's 'modern medicalization' of yoga (Alter 2005) – is a valid one. Nevertheless, the subtle body is maintained as a ground where the participant can find that inner dialogue taking place, and where the translational models described earlier can facilitate the understanding of the ancient Tibetan practices and their application to contemporary settings. In this model, the movements probably also became a translational tool that made the contemplative aspect easier to integrate, than if it was just merely conceived of as 'sitting' or seated meditation. Therefore, with the help of the movements, patients learned to guide their mind and vital breath currents into different areas, opening themselves up to the possibility of healing or harmonizing body, energy and mind, or the body-energy-mind system. This is a goal shared by yogic practices and also a model of good health that is in line with the concept of health or wellbeing in Tibetan medicine (Yeshi Dhonden 1986). Tibetan texts do not explicitly mention concepts of stress reduction, the elimination of intrusive thoughts, or improvement of sleep as benefits. However, as the head teacher of Menri monastery, Lopon Thinley Nyima, states, these and other related outcomes may be included as secondary benefits related to the clearing away of obscurations.[20]

Interestingly, this is also in line with the emerging field of complementary and integrative medicine (CIM), which includes yogic practices as part of their 'mind-body' and 'energy medicine' categories.[21] This field of CIM uses both objective and subjective measurements in research and clinical evaluation. The concept of measurements may seem counterintuitive to contemplative practices; however, they are found in Tibetan yogic texts and oral instructions. Although they are not done by drawing out blood or saliva for analysis or by filling out charts to determine stress level, mood or anxiety, or if you slept well, they not only mention the idea of releasing obstacles as mentioned earlier, but also discuss measuring the heat that related practices (i.e., *tummo* or 'inner heat') may create by the number of breaths needed to dry an almost frozen towel on their bare back or wet it with their perspiration, or methods of counting how long one can hold one's breath during a particular exercise. Clearly such measurements are not the same as those utilized in Western biomedical sciences, but these examples can provide a glimpse into the idea that qualitative and quantitative measurement is not totally absent in the Tibetan yogic traditions.

Many Tibetan doctors have also expressed support for and interest in our studies over the years. The first was Lobsang Rabgay, from the Mind-Body Institute branch in California. During the 2001 'Psyche Soma and Healing' conference at Rice University where he presented, Cohen and I were presenting together at a conference for the first time, during our first pilot study. Dr Rabgay's comments were very encouraging; not only did he believe that we should continue with this work but he also saw its value from the Tibetan medical perspective. As the studies progressed and we finished our second pilot study, we presented at the Second International Conference of Tibetan Medicine, in 2003 in Washington DC. At that venue, we were honoured to be on the panel with the renowned Tibetan Dr Yeshi Dhonden, former physician to H.H. the Dalai Lama, and also had the opportunity to meet and discuss our project with numerous Tibetan doctors, some living in Asia and others in the West. During a trip to Tibet in 2003, I met with Tibetan doctors and researchers in Lhasa at both the Mentsikhang and the Tibetan Medical College. Amongst them was Dr Yang Ga, who since then has moved to Harvard to work towards his Ph.D. in Tibetan religions and the history of Tibetan medicine. We have discussed these issues on several occasions, and at the Meeting of the Association of Asian Studies (AAS) in February 2007, he suggested that through the traditional pulse and urine diagnosis, it is possible to measure the improvements (or changes) of the five *lung* in an individual before and after engaging in *tsalung* or channel breaths movement practices.

I have also begun dialogues related to these issues with other doctors of Tibetan medicine in the U.S. In conversations with Dr Yangbum Gyal, living in Indiana, the latter synthesized the relationship of *lung* and *tsalung* as follows: 'Over all, working with the five *lung* with *tsalung*, it revitalizes the body and mind by balancing and promoting the free flow of prana or *lung*-energy. Regular practice of *tsalung* exercises relieve muscular tension and nervous stress, improves respiration and digestion, benefits the cardiovascular system and leads to deep relaxation and well-being.'[22] Dr Chöying Phüntsog, who has a Tibetan medicine practice in New York City, has also advised some of his patients about the benefits of *tsalung* for their diagnosis. With this in mind, we have been thinking of randomly allocating patients according to their *nyépa* diagnosis. We invited Dr Yeshi Dhonden to M.D. Anderson, and he commented that in effect, different constitutions may be more prone to benefit from *tsalung* and that for others it might even be detrimental from the Tibetan medical perspective. However, as Dr Cohen responded, it is very difficult for the Western agencies, research and

medical doctors to acknowledge such a diagnosis as a criteria for inclusion or exclusion in a clinical trial.

Looking into the Future

What counts as empirical evidence and as truth within the paradigms of clinical science? Is this something we need to look for? Or should we ask what constitutes 'legitimate' medicine in this plurality of ancient and modern discourses? Perhaps what the famed Mexican author and statesman Carlos Fuentes wrote about the Spanish-Americans (i.e., the generations who followed the conquering Spaniards in the Americas), applies here too: it is not about 'choosing modernity over tradition but keeping both alive in a creative tension' (Fuentes 1999: 290).

The bio-behavioural results of *tsalung* practices include QOL, sleep improvement, less anxiety and so forth. These are health improvements due to the TY programme. But should we measure these differences according to their distinct five categories of *lung*? Can we find a way of talking about *lung* that makes sense to contemporary Western medical doctors? Maybe it is time to incorporate what we can 'see' with our scholar or research (third-person) perspective, into the (first-person) phenomenological perspective of the yogi or practitioner. In fact, this is a point that the Dalai Lama and Chilean biologist Francisco Varela, among others, have been emphasizing for almost two decades as an important component in the dialogue between science and spirituality. Namely, we should work 'to reinstate first-person experience as a source of scientific knowledge, and open scientific inquiry to methods such as meditation.'[23] Therefore, can we suggest that these studies may have helped to reshape and refigure the framework in which they started? Do they reflect and embody a particularly Tibetan way of knowing, that other chapters of this volume address? Is this a collaborative cross-cultural scientific research?

Clearly, many of these questions remain unanswered, but together with other issues raised in other chapters, we can become more fluid and sensitive in the way in which we see the borders between 'religion' and 'science'. As these studies continue, all of us who participate in them are constantly being reshaped, which in turn reshapes the paradigm in which we work. I would argue that in the same way that the CAM (Complementary and Alternative Medicine) is moving to CIM (Complementary and Integrative Medicine), these kind of studies are helping that integration, and are being more sensitive to preventing that which is often labelled as

'alternative' (which actually includes 'traditional medicine') from being marginalized or dismissed by more mainstream or hegemonic medical practices, such as 'scientific medicine'. That 'colonialist' model is slowly losing its strength, but the more integrative model is not without its challenges. I hope that these Tibetan yoga studies contribute in a small way to the bigger picture of the exploration of a new medicine that includes science and spirituality.

Notes

1. Borrowing from David Germano's translation 'channel-winds practices' (1994: 662), I will use the term 'channel breaths' practices. I feel this translates it accurately from the Tibetan and brings a better sense of the subject matter: a specific practice that utilizes the channels and different aspects of breath. This will become clearer below.
2. I would like to thank Vincanne Adams for this new phrase and for encouraging me to reformulate my work using this kind of terminology.
3. William Gorvine, 'Reflections on the Life and Legacy of Shardza Tashi Gyaltsen', talk at Ligmincha Institute Summer Retreat, Nelson County, VA, July 2003. See also Gorvine 2006.
4. Jon Kabat-Zinn's Mindfulness Based Stress Reduction (MBSR) programme at University of Massachussetts Medical School pioneered this area. Through clinical applications and research it has opened the doors to the acceptance of meditative programmes in the medical arena. It is still a small, yet significant, openness in the Western medical system at large.
5. Earlier conferences, which were held privately, became the basis for many books, such as *Consciousness at the Crossroads: Conversations with the Dalai Lama on Brain Science and Buddhism* by Houshmand et al. (1989). One can find all the books, conferences and other related events at the Mind and Life Institute website: www.mindandlife.org.
6. See Samlek (1985), especially the chapter on the 'Luminous Sphere of the Elements' (*'Byung ba'i thig le*), p.591–619. See also the magical movement chapter, called the 'Quintessential Instructions of the Oral Wisdom of Magical Movements' (*'Phrul 'khor zhal shes man ngag*) in Chandra and Namdak (1968), in particular chapter *A*, p.631–43.
7. This summary is adapted from K.D. Chandwani, M.A. Chaoul and L. Cohen (2008).
8. Although many times written as *bgegs*, in Shardza's *Commentary* this type of 'obstacle' or 'hindrance' is spelled *gegs* and in *Quintessential Instructions* as *gags.* Thus far I have not been able to find if there are any significant differences in meanings among them. It seems that *bgegs* is utilized more to express obstacles or hindrances provoked by demons or malignant spirits *dü*, *dön* etc.
9. The measurements tools used were: Impact of Event Scale (IES) to measure intrusive thoughts and avoidance behaviours; Centers for Epidemiologic Studies-

Depression (CES-D) to measure depressive symptoms; Pittsburgh Sleep Quality Index (PSQI); Bodily Fatigue Index (BFI) for fatigue; Health Status Survey 36 (SF-36) for quality of life; and Functional Assessment of Cancer Therapy Spiritual Well-Being Scale (FACT-SP) for meaning and spirituality.

10. Overall, sleep disturbances in TY were lower (5.8 vs. 8.1; $p < 0.004$) during the follow-up period compared to the control group. Participants practicing Tibetan yoga had better sleep quality ($p < 0.02$), had less difficulty falling asleep ($p < 0.01$), slept significantly longer, and used fewer sleep medications ($p < 0.02$) than did those in the control group. As we will see below, one of the important questions is 'how can we talk about these issues in this context?' See also Cohen, et al. 2004.
11. Some examples of clinical research with cancer populations finding benefit in physical exercise are: Basen-Engquist et al. 2006 and Dimeo et al. 2008.
12. Chandra and Namdak (1968: 632.2–632.3); Shardza Tashi Gyaltsen (1974a: 322.2–322.3).
13. We see the same names used for the different vital breath currents in different Tibetan and Indian medical texts as well as in various Tibetan Tantric texts. However, as Dr Yeshi Dhonden remarks, the Tibetan medical texts locate the life-sustaining vital breath at the crown of the head and the pervading vital breath at the heart, and in the Tantric texts this is reversed: 'Moreover, when Tibetans refer to disorders of the life-sustaining wind, we always refer to the heart, which is where such disorders are felt, with symptoms such as heaviness, palpitation, throbbing, and so forth. Thus, even though the medical tantras [i.e., *Gyüshi*] say it is located on the top of the head, in actual practice Tibetan doctors identify it as being located at the heart. So there is somewhat of an incongruity between theory and practice' (Yeshi Dhonden 2000: 24–25).
14. This needs to be further researched.
15. The vital breath as horse and the mind as its rider is a common metaphor in Tantric texts, such as the *Mother Tantra*.
16. Numerous Tibetan, Indian and Chinese texts describe the subtle body (see also the pioneering work by Scheper-Hughes and Lock 1987, contextualizing these in a Western medical setting). Anne Harrington's work (2008) portrays some of the most recent works contextualizing this thought in the West.
17. Dzogchen, which was mentioned earlier, is the school of thought and practice that is considered to be the highest among the Nyingma and Bön traditions. For detailed information, see Karmay 1988.
18. The wisdom of realizing is sometimes called insight or exalted knowledge (*shérab*) and is the pair of method. In the Dzogchen school, that realization is a process of re-discovering that primordial nature or 'Buddha nature' (*de bzhin gshegs pa'i snying po, tatagathagarbha*) that every sentient being (endowed with 'conciousness') possesses.
19. Tenzin Wangyal Rinpoche, personal conversation with the instructors of the TY programme for people with cancer, Houston, February 2008.
20. Ponlob Thinley Nyima, 'Mind-body practices of the ancient Tibetan Bön tradition', talk at Rice University, Houston, TX, April 2005.

21. See the National Center of Complementary and Alternative Medicine (NCCAM) report 2004 (www.nccam.nih.gov).
22. Personal communication, January 2007.
23. Cognitive scientist Eleanor Rosch talking about Varela in B. Boyce, 'Two Sciences of Mind', *Shambhala Sun*, September 2005, p.36.

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Chapter 13

Epilogue: Towards a *Sowa Rigpa* Sensibility

Geoffrey Samuel

The chapters in this book are innovative in the multi-dimensional picture that they present of the interaction, over a wide range of places and times, between Tibetan modes of healing and the European-derived tradition of biomedicine. They are innovative in another respect as well; as Vincanne Adams, Mona Schrempf and Sienna Craig announce in their Introduction, this volume is intended to present an account that is based on the sensibility of *sowa rigpa*, the Tibetan 'science of healing', rather than that of biomedicine, and that takes *sowa rigpa*, not biomedicine, as its epistemological starting point. In this closing chapter, I reflect on what this might mean, and on the ways in which the previous chapters can be seen as having contributed towards such a perspective.

When the editors speak of *sowa rigpa* as an epistemological starting point, they do not necessarily mean, as I understand it, a perspective that regards the conceptual framework of Tibetan medicine[1] as laid down in the *Gyüshi* (*Four Tantras*) – the three *nyépa*, the five elements, and the rest – as primary. Certainly many of our authors take those concepts more seriously than they might be taken by a hard-line proponent of evidence-based biomedicine, but I assume that this is not the central point at issue. The editors' intention is rather to expand our sense of what medicine and healing might involve, in order to include concerns that might seem as much religious or spiritual as medical. The objective implied by the terms *sowa rigpa*, they remind us, is 'to make well and complete'. Through 'making health, healing, curing, nourishing and comforting', such a tradition of healing aims at achieving balance both within the human body, and between our bodies and the environment within which we live. This environment includes fellow human beings, and also other kinds of beings, including, for the Tibetans, many types of spirit-entities.

Thus, if biomedicine today aims at arriving at a set of rational, culture-free, evidence-based procedures, applicable in all contexts and situations, and defining itself sharply against the unscientific and pre-modern, a *sowa rigpa* sensibility has other goals. It is certainly concerned with efficacy, but efficacy here is understood more in human than scientific terms, and allegiance to any particular body of medical knowledge may be a secondary issue. What matters is to bring about healing, in the wider sense recognized above.

Put in these terms, we might recognize that many Western doctors, too, have worked and still do work from a sensibility closer to that of *sowa rigpa* than to that of biomedicine, responding to the human needs of the patient rather than to the formal requirements of the medical system within which they are situated. The institutional structures of biomedicine nevertheless make it difficult for such doctors to acknowledge that this is what they are doing. The institutional dominance of evidence-based medicine, with the randomized controlled trial (RCT) as its key procedure, is supported by enormously powerful political, legal and financial forces (cf., Adams 2002).

It is no accident perhaps that many, though certainly far from all, of the contributors to this volume are medical anthropologists. Medical anthropology has for many years been one of the few scholarly locations from which a sustained attempt has been made to describe the wider context within which biomedicine operates. Medical anthropologists have sought to trace the interactions between biomedicine and other modes of healing without necessarily assuming the absolute priority of one over the others. The perspective outlined by the editors of this volume, it seems to me, is, however, something more than, and different from, the view from medical anthropology. It is a perspective that explicitly regards healing, in its widest sense, as the ground of our analysis, and as constituting the frame within which to view the ongoing interaction of Tibetan and Western practices.

We should not underestimate the radical and forward-looking nature of this proposal, particularly in view of the tensions and differences with which an evolving field of study and practice such as Tibetan medicine and healing today is invested. I have referred elsewhere to some of these tensions and conflicts (Samuel 2008: 254–55), and the volume in which I made those remarks contains many further examples (Pordié 2008). A careful reader can find signs of such difficulties and disagreements within the present volume as well. Tibetan and non-Tibetan practitioners of Tibetan medicine, Western anthropologists, biomedical scientists and other actors within this field have specific interests and perspectives and these are not always easy to reconcile. If we are to go beyond such difficulties and

conflicts, however, then a *sowa rigpa* sensibility may provide a way forward. It has the potential to bring us all back to the goal of health and harmony, both within each individual living being, and within the wider world in which we live our lives. Those individual lives may be characterized by the forces of desire, hatred and ignorance which the Tibetan medical classics posit as the root of all illness, but *sowa rigpa*'s goal of health and harmony is perhaps one which we can all respect.

The *sowa rigpa* perspective also reminds us, as do many of the chapters in this book, of the importance of a grounded and pragmatic approach to our subject matter. A *sowa rigpa* perspective is concerned less with scientific validity, although such issues necessarily surface in several places within the volume, than with working towards a world in which appropriate forms of healing are fully available to all who need them. Thus the critical approaches to science developed by scholars such as Latour (e.g., 1993), Nandy (1988) or Viswanathan (1998) are important, since they help us to understand the limits of the claims that can validly be made on behalf of medicine, but it is at least as important to appreciate that for much of the world's population the problem is not biomedical dominance, but lack of access to any effective form of healing.

The case-studies in the chapters by Mona Schrempf and Kim Gutschow (Chapters Seven and Eight) remind us forcibly of this issue. They present us with material that is all too familiar to those who have lived outside those areas in the first world and in privileged enclaves around the globe where high-quality biomedical health care can be taken for granted. In those places where most of the world's population lives, and will continue to live, clinics, if they exist at all, may lack even the most basic medical supplies and facilities, access to hospital care may be physically impracticable, or far too expensive, and medical staff may rarely visit rural clinics or hospitals, preferring to cultivate their more lucrative private practices in the city. At the same time, as Gutschow's account of childbirth in Zangskar in particular makes clear, there are people within these situations who are working with dedication and often against great obstacles to provide adequate health care.

These chapters remind us that irrespective of the genuine achievements of Western medical science, there are limits to what it can deliver in a world of uncertain and incomplete resources. As such signs as the fall in the life expectancy in the former Soviet Union and the revival of tuberculosis indicate, we can by no means assume that even the achievements of the past will be maintained. For a large part of the world's population, the situation in relation

to biomedical health care is worsening, not improving. The progressive dismantling of state health systems and the consequent privatization of health care around the world – including the People's Republic of China, where Schrempf's study is located – mean that poor people may have less access to quality health care than ten or twenty years ago.

Thus, for the vast majority of the world's population, health care provision remains limited and inadequate. But one can find this in the West as well. As the cost of high-tech medical interventions increases, these are inevitably rationed, whether by policy as in the U.K. under an increasingly resource-strained National Health Service, or by the patient's ability to pay, as in the U.S. The pharmaceutical industry ('Big Pharma') does not necessarily help matters, since it is driven by commercial rather than humanitarian imperatives. A *sowa rigpa* sensibility would lead us naturally to look these situations in the face, rather than to celebrate what one or another healing system might deliver in ideal and unattainable conditions.

It might also take us further. The *sowa rigpa* sensibility surely leads us to confront a fundamental question: what is the significance of health within a human life as it should ideally be lived? If we are serious about seeing our goal as achieving balance both within the human body, and between our bodies and the environment in which we live, a *sowa rigpa* sensibility has more radical implications than merely ending the automatic privileging of biomedicine over other healing modalities. It also leads us to question whether the biomedical emphasis on maintaining life regardless of its quality or meaning is always appropriate, and to ask how our attitudes to health and healing relate to our understandings of life as a whole.

We can exaggerate the extent to which all Tibetans were pious Buddhists, but it is nevertheless true that questions of life and death within Tibet were until recently, and in many ways still are, cast within a framework of ideas regarding the meaning of life of a kind that has largely vanished from the everyday discourse of most Western societies. We can still see elements of such thinking, for example, in Mona Schrempf's account from Amdo of Lhamo's two daughters, one the rebirth of a close friend, the other of her grandmother. Beyond specifically Tibetan issues of *karma* and rebirth, there lies the wider question of the meaning of health within human life.

In other words, health is not just about making sure that bodies work properly. It is also central to how we, as conscious and embodied beings, choose to live and experience our lives. In fact, any perspective that accepts and recognizes the subjective meaning of ill-health to the sufferer leads sooner or later to such reflections. The body cannot be separated from the

mind, and we perform a tacit act of epistemic violence every time we try to do so. Such a separation is built into many biomedical procedures, for example by the technology of anaesthesia. Anaesthesia has of course led to an enormous reduction in human suffering, but at the same time it transforms a human being into an inevitably objectified slab of flesh, with the consciousness intrinsic to the body-mind complex temporarily bracketed out of the healing process. The double-blind randomized controlled trial (RCT), that central procedure of evidence-based medicine, is another process that objectifies the patient and removes his or her subjectivity from the equation. The whole concept of the placebo, whose essence is arguably meaning and subjectivity (Moerman 2002), is produced by the RCT and evidence-based medicine. By reducing healing to what can be measured through the RCT, those factors that cannot be measured in such a manner are systematically discounted.

This leads to a consistent leaching of meaning and subjectivity out of the healing process. Yet, as the so-called placebo effect demonstrates, meaning and subjectivity contribute enormously to successful healing. Lay people know this, instinctively or intuitively, and the increasing popularity of complementary, alternative or integrative medicine is precisely a response to that knowledge.

If the above has given us some sense of what a *sowa rigpa* sensibility might be, in what ways do the chapters of this book contribute to it? Chapters Two and Three, by Alex McKay and Martin Saxer, present us with a valuable starting point, both being set in the first half of the twentieth century, in the earliest stages of the dialogue between Tibetan and biomedical approaches to healing. In Chapter Two, Alex McKay takes us through the limited and, in its way, rational and sensible adoption of elements of Western medicine by the Tibetans in the first half of the twentieth century. For all its frequent depiction as a closed, traditional society, Tibet was able to adopt a variety of healing techniques (vaccination for smallpox, biomedical treatment for cataracts, wounds and fractures, and venereal disease) in a relatively empirical and pragmatic manner. A biomedical perspective might see here a technologically inferior, pre-scientific culture, confronted by the evident superiority of Western medicine, and making a selective and partial adoption of such elements of the West's superior knowledge as it is able to absorb. McKay gives us something rather different. His account recognizes the political motivations behind British medical policy in Tibet, and shows a pragmatic process of adoption by the Tibetans in areas where greater efficacy was evident and

therapies made sense in Tibetan terms. We could overstate the argument, but there are signs in Tibetan behaviour here of a *sowa rigpa* sensibility, for example in the way in which British physicians were assimilated to the Tibetan ideal of the doctor/healer.

Martin Saxer's account in Chapter Three of the encounter between Tibeto-Mongolian medical practice and biomedical science in Russia in the late nineteenth and early twentieth century has parallels with McKay's study, but also marked contrasts. Sultim Badma, Pyotr Badmayev, and their patrons, and the Buryat and Kalmyk *amchi* working towards official recognition for Tibetan medicine in Russia confronted a European medical system characterized by intolerance and monopoly. The Theosophical thirst for exotic wisdom provided some support and patronage for the practice of Tibetan medicine, but the Theosophists were in no position to take on the Russian medical establishment. The defenders of Tibetan medicine had little choice but to concede that large parts of the Tibetan system were the products of 'ignorance' and 'superstition', even while they attempted to claim scientific status for the remainder. Pyotr Badmayev held out for the compatibility of Tibetan medicine with proper Western-endorsed religion in the form of Russian Orthodoxy, but this too was to prove a risky position with the coming of the Revolution.

The Buryat and Kalmyk practitioners, while linked to Theosophical patronage and internal Buddhist reform movements, were again increasingly driven to deploy the rhetoric of scientific modernism in their attempts to achieve official recognition for monastic medical colleges. The brief existence of an independent Buryat Republic meant that they had some success in the immediate post-Revolution period, but the collectivization of agriculture under Stalin in 1929 meant that *lama* were seen as enemies of the State, and Buddhist medical practice, like other aspects of the Buryat Buddhist reform programme, fell by the wayside.

Ultimately, Saxer suggests, all of these practitioners, and their critics, were involved in 'validating or contesting political claim[s] to be part of modernity and thus a legitimate supplier of state acknowledged medicine'. Saxer's case-studies illustrate the limits of the Western episteme. If one rejects what is outside the limits of biomedicine as unscientific, it is very difficult to develop criteria for making distinctions among what is rejected. Here the *sowa rigpa* perspective, as displayed in McKay's account, was perhaps able to be more genuinely empirical and pragmatic. At the same time, the various strategies employed by the Badmayevs and Buryats in the early twentieth century to validate their practice in Western terms – claims to scientific status, assimilation of alternative, anti-modern discourses –

prefigure strategies utilized by proponents of Tibetan medicine among the Tibetan refugee community in more recent times.

In Chapters Four to Six we move to these more recent times. These chapters look more closely at some of the issues that emerge on the interface between Tibetan and biomedical (or more generally Western-language) categories. Stephan Kloos's account (Chapter Four) of the Dharamsala Men-Tsee-Khang's careful positioning of itself in relation to both modern science and 'traditional' Tibetan culture is both exemplary and illuminating. By the 1990s, the Men-Tsee-Khang (MTK) doctors had much more to work with within the Western cultural context than had the Badmayevs. Tibetan Buddhism and in particular H.H. the Dalai Lama were widely recognized at a global level. Alternative medicine was extensively practised in some Western countries, and it was linked to a developed critique of science within Western and Asian academic contexts. All this allowed for a relatively complex and sophisticated situating of Tibetan medicine. The MTK presents Tibetan medicine as being like biomedicine in that it is 'scientific', unlike it in that it retains an altruistic motivation to 'help the world' which (explicitly or implicitly) is said to have vanished from the biomedical tradition. At the same time, the MTK views biomedical science itself as playing a supporting role in legitimating Tibetan medicine, by demonstrating its efficacy in scientific terms.

Kloos's account may seem to portray the MTK's strategies of self-presentation as primarily instrumental. However, he also portrays the 'ethical motivation' of Tibetan medicine as something that is produced and perpetuated by Tibetan medicine in exile. Indeed, he goes further than this, arguing that Tibetan medicine, as presented by the MTK, plays a key role in 'producing an ideal, modern Tibetan subjectivity'. At the same time there is a cost to the MTK's strategy, since it involves both an ongoing *rapprochement* with biomedicine and 'Big Pharma', and a marginalization of those aspects of Tibetan healing ('magical' and 'Tantric') which do not fit easily into the scientific perspective.

If the MTK's strategies in the early twenty-first century present a more sophisticated and successful version of those of the Badmayevs nearly a century earlier, Vincanne Adams, Renchen Dhondup and Phuoc Le (Chapter Five), bring us up-to-date with the Tibetan assimilation of biomedicine of which we saw the early phases in Chapter Two. As Adams, Dhondup and Le note, a number of studies have presented Tibetan medicine as threatened by the 'rising tide of biomedical resources'. Their aim here is to examine the reverse situation, the ways in which biomedicine

is being used by practitioners of Tibetan medicine, in the context of a large and impressive Tibetan Medical hospital in Xining and its associated medical school, research institute and pharmaceutical factories, all forming part of a private corporation, the Arura Medical Group.

Identity politics is less salient here. Assertions of Tibetan identity within the People's Republic of China are inevitably more muted than in the diaspora, although the Tibetans' status as one of the recognized nationalities of the PRC allows some room for manoeuvre. Equally, claims for the superiority of Tibetan medicine are less strident than outside the PRC. Tibetan medicine nevertheless has, as Sienna Craig and Vincanne Adams have argued elsewhere (Craig and Adams 2009), an aura of purity, spiritual power and efficacy both for many Tibetans and increasingly for other peoples of the PRC. The relationship with biomedicine in Xining appears to be closer than at the MTK, with regular use of biomedical testing alongside Tibetan pulse diagnosis, as well as biomedicine being regarded, as in Dharamsala, as a source of validation.

Adams, Dhondup and Le note that the transactions between biomedicine and Tibetan medicine are inevitably two-way, particularly in relation to diagnostic reasoning and practice. The general picture they portray, however, is of biomedical categories being in a secondary place, useful when they support Tibetan diagnoses, but ignored where they fail to do so. In fact, not all staff in the Jinhe establishments support the use of biomedical techniques. Adams, Dhondup and Le point to a certain awkwardness arising from the poor fit between Tibetan and biomedical techniques of research and models of efficacy. It seems though that at Xining, Tibetan medicine has been able to establish a situation of relative autonomy from biomedicine, and to incorporate biomedical practices in modified form as a supplement to Tibetan medical practice.

Barbara Gerke's study (Chapter Six), focusing on parallel developments in India, again centres on issues of the practical relationship between Tibetan medicine and biomedicine. Gerke shows how much of the early writing on Tibetan medicine in Western languages, both by Westerners and Tibetans, has been marked by simplistic equations between Tibetan and Western categories. These have arguably affected the way in which Tibetan medicine itself has been understood. Thus the translation of the term *nyépa* as 'humour' suggests possibly inappropriate assumptions of balance between the humours similar to those in Greek and Arabic medicine. Naïve equations between Tibetan and biomedical disease categories (*cinnyi* and diabetes, etc.) are beginning to be rethought by

Tibetan *amchi* as they come to terms with the very different intellectual assumptions of Western medicine. At the same time, *amchi* may selectively integrate and transform elements of biomedical vocabulary (oxygen, haemoglobin) to build connections for themselves and their patients with the biomedical environment within which they now operate.

If we were to ask what a *sowa rigpa* sensibility might mean in relation to Chapters Four to Six, we might choose to move away a little from the questions of strategy, positioning and politics that come naturally perhaps to a contemporary Western social scientist when looking at this material. Amchi in Chinese-controlled Tibet and in the diaspora are by necessity engaged with political issues, but they are also committed to their central task of healing. There is no reason to assume that their appropriations of Western ideas are solely a matter of political expediency. In fact the three chapters signal this in various ways, most notably through the sense conveyed in Chapters Five and Six of *amchi* making use of biomedical techniques as a supplement to Tibetan medical procedures and (in the case of Amchi Jamyang in Chapter Six) as a way of communicating with patients who are increasingly more familiar with biomedicine than Tibetan medicine.

In Chapters Seven to Nine we begin to see Tibetan *amchi* incorporating biomedicine as part of a pragmatic body of healing techniques whose rationale lies in their ability to heal, not in their justification in terms of Tibetan or biomedical theory. These chapters present little of the religious or spiritual dimension of *sowa rigpa*, in part because such a dimension raises problems in the bureaucratic and urban locations described here. Both in China and in the Tibetan diaspora, the spiritual dimension of Tibetan healing is part of its attraction, but to draw too much attention to such aspects runs the risk of courting dismissal as unscientific, a point made neatly by Sienna Craig's study of the empowerment of medicine in the ironic context of an RCT in Lhasa (Chapter Nine). Here both doctors and patients are happy for the medicine and the placebo to be ritually empowered, but nobody wants too much attention to be drawn to the fact. When Craig explains that the Tibetan for 'placebo' (*semso men*) literally means 'medicine to heal the mind', we can see some of the conceptual difficulties that are being carefully sidestepped in these intercultural encounters.[2]

The other fieldwork-based chapters in this section (Chapters Seven and Eight) are wholly or partly located in rural areas, away from the critical eyes of urban authorities. Here *sowa rigpa* operates much more on its own terms, and the relationship with the religious dimension and with concerns to do with the spirit world is also more salient. As Schrempf puts it (Chapter

Seven), the *mantra* of the diviner and the doctor's syringe are 'two general iconic poles in a shared cultural logic of healing'. Schrempf argues that the *sowa rigpa* sensibility here helps us to appreciate that the issue for local people is not Tibetan medicine versus biomedicine, but how to find an effective and appropriate response to a particular problem.

Schrempf's case-studies from rural Amdo illustrate different aspects of this cultural logic. She begins with the diviner, a key part of the health referral system in rural Tibetan practice if not in Chinese state ideology. Divination indicated that an expensive operation would not help Tserang's mother's cancer, so her daughter, a biomedical doctor, cared for her at home until her death, although she was unsure whether she had made the right decision. In other situations, the diviner, who is also a ritual specialist, might recommend both ritual healing and Tibetan medical or biomedical treatment.[3] Schrempf's remaining case-studies demonstrate the interplay of *karma* and ritual efficacy, and the incorporation of biomedical technology radically reconceptualized in local vernacular terms. Thus intravenous infusions and injections are seen as ways of cooling down 'hot' conditions ('hot' here in humoral terms).

Kim Gutschow's study is an account of childbirth in Zangskar (in Northwest India). Childbirth is an area where practitioners of Tibetan medicine seem in practice to have had little involvement, in part perhaps because, as in Zangskar, they were concerned about the consequences of birth pollution for themselves and their medicines.[4] As in many rural areas in South Asia and elsewhere, the availability of biomedical assistance in childbirth is limited in much of rural Ladakh, although the village where Gutschow worked has benefitted recently from the determined work of a local woman doctor and two trained nurse midwives at the district clinic. Hospital birth in Ladakh, where available at all, is both heavily medicalized and not a particularly safe option. A *sowa rigpa* sensibility here might be critical of both Tibetan Buddhist tradition and biomedicine as locally delivered, although, as Gutschow points out, ideas of birth pollution at least allow the birthing mother a month's rest after childbirth. As she also notes, post-birth seclusion may help to protect the child from the high local risk of mortality from respiratory and gastro-intestinal disease.

Chapters Ten to Twelve move us to confront directly an issue that has hovered over many of the earlier chapters. This is the possibility of a genuinely constructive engagement between Tibetan medicine and biomedicine. These three chapters perhaps demonstrate the *sowa rigpa* sensibility most directly, since each is concerned with looking pragmatically

at how Tibetan healing practices and Western biomedical approaches could contribute jointly to developing more effective modes of healing. In Chapter Ten, Mingji Cuomu, a Tibetan *amchi* who has also experienced the Western social scientific approach to Tibetan medicine, provides a careful and sensitive account of the problems of biomedical research into Tibetan medicine, hinting at how such research is inflected in Tibet by shifts in state medical policy and by the institution of new technology and new production methods for medicine. Cuomu suggests that research into Tibetan medicine could be carried out using modern biomedically-derived approaches, but also outlines some of the problems and difficulties involved in research of this kind, including the intrinsically qualitative rather than quantitative nature of Tibetan medical judgement. She supports the idea of biomedical research into Tibetan medicine in general terms, but emphasizes the need to proceed carefully and with awareness of the very real differences between the traditions.

Olaf Czaja's chapter (Chapter Eleven) focuses on one key event in the *rapprochement* between Tibetan and biomedical systems, an MTK-organized conference that took place in Dharamsala in 1996 at H.H. the Dalai Lama's initiative. The conference discussed Tibetan approaches to diabetes and cancer; Czaja's chapter focuses on the discussions of cancer (Chapter Six, by Barbara Gerke, considers one of the papers on diabetes). Czaja shows how, despite the tendency to present Tibetan medicine as having solutions for all human ailments (with 'new' diseases such as HIV/AIDS having been predicted in ancient texts, along with appropriate modes of treatment), the *amchi* at the conference by no means agreed on how to classify cancer in Tibetan terms. Some, at least, were also aware of the risks of claiming that Tibetan medicine could cure cancer, especially given that any claim to cure would have to be validated in biomedical, not Tibetan, terms. The chapter gives a glimpse into the complex internal conversations within Tibetan medicine, as *amchi* establish how best to deal with the encounter with biomedicine.

Alejandro Chaoul's chapter (Chapter Twelve) provides an update on a particularly significant and innovative application of an aspect of Tibetan healing which lies well outside the familiar Tibetan medical system of the *Gyüshi*. The 'channel breaths' (*tsalung*) and 'magical movement' (*trülkhor*) practices with which Chaoul has been working, with the collaboration of the Bönpo *lama* Tendzin Wangyal Rinpoche, derive from Tibetan Tantric practices found in both Bönpo and Buddhist traditions. Their primary purpose is to balance and condition the human body-mind complex as part

of a pathway to spiritual attainment; as such, they also have potential health benefits, particularly in their ability to calm and relax the body and mind as a whole. Chaoul has been employing an adapted form of these practices in the context of lymphoma and, more recently, breast cancer. The primary justification of such work, to return to the *sowa rigpa* sensibility, is to bring some benefit to people suffering with cancer. As Chaoul's chapter demonstrates, it also has the potential to stimulate rethinking within Western biomedicine. Such rethinking might both allow a more subtle and less dismissive encounter with the 'religious' aspects of Tibetan practice, and also assist in a move away from seeing Tibetan practices as 'alternative medicine' towards a genuine integration between Tibetan and biomedical approaches.

What is being attempted in this book is new, and inevitably tentative. These are initial steps in the articulation of a new and different relationship between Tibetan and biomedical approaches to healing. Such a relationship was prefigured in part by early twentieth-century pioneers such as Piotr Badmayev and the Buryat and Kalmyk *amchi* in Russia or Khyenrab Norbu in Lhasa, but the circumstances for a genuine and mutually enriching engagement between the two traditions of healing were not yet present. Today, while there are undoubtedly still obstacles to achieving such a positive relationship, there is both a critical mass of people working in various ways on collaboration between the two traditions, and also a general climate of thought more favourable to such mutual engagement and towards genuine integration.

Such integration will inevitably change both sides, but if we hold to the perspective suggested by the *sowa rigpa* sensibility advocated in this volume, there should be nothing to fear in such change. The point is after all not to hold on to past formulations, but for them to serve as creative starting points for meeting the health needs of all who live in today's global society.

Notes

1. In order to avoid confusion, when referring to the *Gyüshi*-based tradition, I use the term 'Tibetan medicine' rather than *sowa rigpa*.
2. One should note perhaps that *sem* covers a wider area than English 'mind', explicitly including feelings, emotions and motivational states.
3. As Schrempf notes, the role of divination has received little recognition in the literature on Tibetan medicine, but it is actually of key importance. My own fieldwork (with Linda Connor and Santi Rozario) among the Tibetans of

Dalhousie in India in 1996 showed a similar central role of divination in relation to health-related decisions.

4. Santi Rozario's research in Dalhousie in 1996 indicated that women frequently gave birth with the help of their mothers, mothers-in-law or husbands (Rozario and Samuel 2002: 194–98).

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